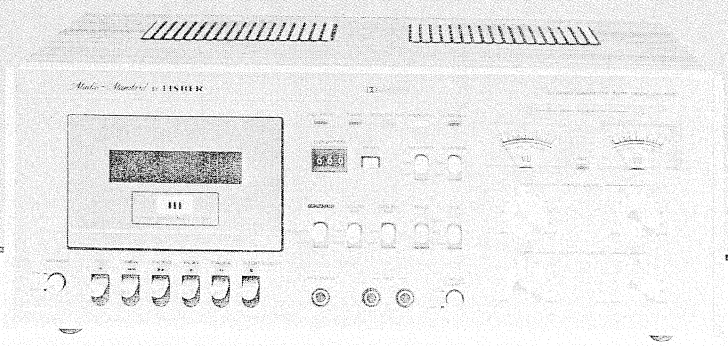
SERVICE MANUAL

FISHER

CR-5120

Stereo Cassette Tape Deck
With DOLBY Noise Reducer
(EUROPE)



THE FIRST NAME IN HIGH FIDELITY

SPECIFICATIONS

Recording System	AC Bias
Erasing System	AC Erasing
Tape Speed	1-7/8 ips. ±1%
Fast Forward Time	100 sec. (C-60 cassette)
Rewind Time	100 sec. (C-60 cassette)
Wow & Flutter	0.07% RMS
Frequency Response (Record/Playback)	
CHROME	30 – 16,000 Hz
NORMAL	30 – 14,000 Hz
Signal to Noise Ratio (Tape: CrO_2)	
without DOLBY	Better than 52 dB
with DOLBY	Better than 62 dB
Crosstalk	
Track to Track	Better than 70 dB
Channel to Channel	Better than 40 dB
Distortion (3rd harmonic)	
CHROME	2.5%
NORMAL	1.5%
Terminal Impedance	
MIC	10 k-ohm
DIN INPUT	20 k-ohm
DIN OUTPUT	2 k-ohm
LINE IN	100 k-ohm
LINE OUT	2 k-ohm
Headphone	8 ohm
Power Consumption	24 W
Power Source	AC 110/125/220V (50/60 Hz)

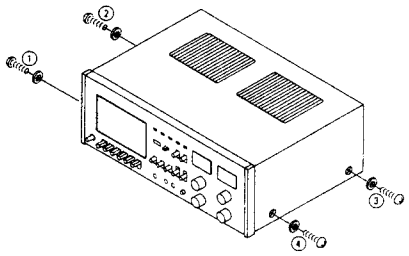
–Specifications subject to change without notice.–

DISASSEMBLY

CABINET DISASSEMBLY

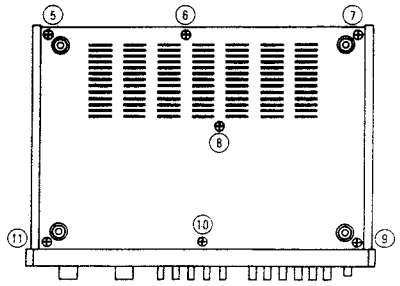
WOODEN CABINET ASSEMBLY REMOVAL

Unscrew the four screws (1 – 4) fastening the Wooden Cabinet assembly and remove the four washers.
Remove the Wooden Cabinet assembly by lifting it.



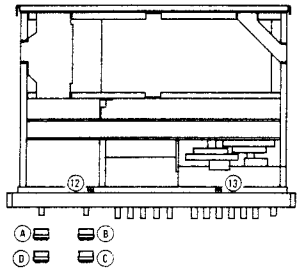
PANEL SHEET REMOVAL

Turn the unit upside down on a clean soft surface.
Remove the Panel Sheet by unscrewing the seven screws (5 – 11) fastening it.

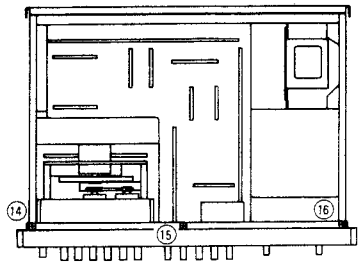


C. FRONT PANEL ASSEMBLY REMOVAL

1. Pull out the four knobs (A – D) from the unit.
2. Unscrew the two screws (12 – 13) fastening the lower side of the Front Panel assembly.
   Then, place the unit in an upright position.



3. Unscrew the three screws (14 – 16) fastening the uppersic of the Front Panel assembly.
   Pull out the connector (CN24) from the Pre-Amplifier P.C.B.

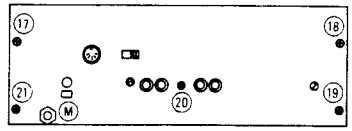


4. Remove the lead wires which connect the connector (CN24) with the Peak Indicator from the wire-clamps.
5. Remove the Front Panel assembly and the three spacers from the unit.

DISASSEMBLY (Continued)

D. BACK PANEL REMOVAL

1. Pull out the connector (CN27) connecting the RECEIVER DE-EMPHASIS Switch P.C.B. from the Switch P.C.B.
2. Pull out the connectors (CN17, CN34 and CN35) connecting the DIN socket from the Pre-Amplifier P.C.B.

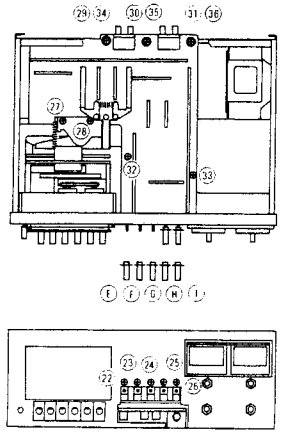


3. Loosen the nut (M) of the Bushing and remove the Back Panel from the unit by unscrewing the five screws (17 – 21) fastening it.

4. **Reassemble the Cabinet in the reverse order.**

PRE-AMPLIFIER P.C.B. ASSEMBLY REMOVAL

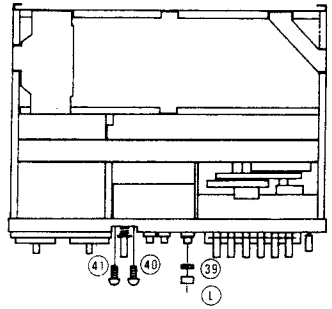
1. Follow the instructions for the Cabinet Disassembly.
2. Pull out the five knobs (E – I) of the switches attached to the Pre-Amplifier P.C.B. and unscrew the five screws (22 – 26) fastening the switches.
3. Pull out the connector (CN3) from the Power Supply P.C.B. and remove the lead wires from the wire clamps.
4. Pull out all connectors (CN12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 28, 29, 36, 40, 41) and the RT Pin sockets (CN51, CN52 and CN53) which are necessary for the removal of the Pre-Amplifier P.C.B.
5. Unscrew the two screws (27 – 28) fastening the Record Lever Bracket and remove the Bracket.
6. Unscrew the five screws (29 – 33) and the three fiber washers (34 – 36) fastening the Pre-Amplifier P.C.B. and remove the P.C.B. from the unit.



7. Reassemble in the reverse order.

JACK P.C.B. ASSEMBLY REMOVAL

1. Follow the instructions for the Cabinet Disassembly.
2. Turn the unit upside down and pull out the connectors (CN30, 31, 32, 33) from the Jack P.C.B.
3. Remove the spacer (L) and the nut (39) of the Headphone Jack.
4. To remove the P.C.B., unscrew the two screws (40 – 41) fastening the INPUT Selector.

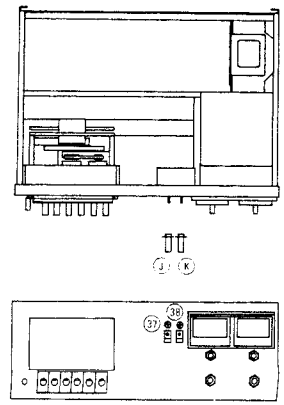


5. Reassemble in the reverse order.

SWITCH P.C.B. ASSEMBLY REMOVAL

(MEMORY & LIMITER SWITCHES)

1. Follow the instructions for the Cabinet Disassembly.
2. Pull out the two knobs (J – K) of the switches attached to the Switch P.C.B.
3. Pull out the connector (CN28) and the RT Pin socket (CN44) from the Pre-Amplifier P.C.B. and the Control Circuit P.C.B.
4. Pull out the two RT Pin sockets (CN42 and CN43) from the Switch P.C.B.
5. Unscrew the two screws (37 – 38) festening the switches and remove the P.C.B. from the unit.

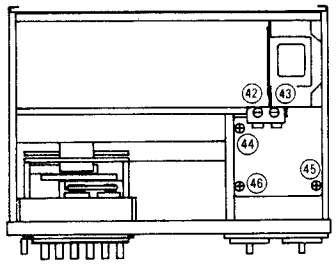


6. Reassemble in the reverse order.

DISASSEMBLY (Continued)

OWER P.C.B. ASSEMBLY REMOVAL

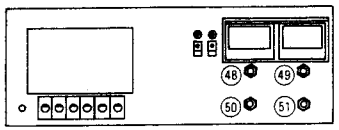
Follow the instructions for the Cabinet Disassembly.
Pull out the three connectors (CN1, CN2 and CN3) from the Power Supply P.C.B.
Unscrew the five screws (42 – 46) fastening the Power Supply P.C.B. and remove the P.C.B.



. Reassemble in the reverse order.

/OLUME CONTROL P.C.B. ASSEMBLY REMOVAL

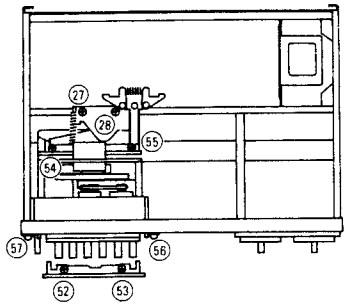
. Follow the instructions for the Cabinet Disassembly.
. Unsolder the lead wires which connect the P.C.B. with the Meters and the lead wires which connect P.C.B. with the meter illumination Lamps.
. To remove the Volume Control P.C.B., remove the four nuts (48 – 51) fastening the Volume Controls.



1. Reassemble in the reverse order.

CHASSIS REMOVAL

1. Follow the instructions for the Cabinet Disassembly.
2. Open the cassette compartment lid by pressing the EJECT button.
   Then, remove the cassette compartment lid by unscrewing the two screws (52 – 53) fastening the lid.
3. Unscrew the two screws (27 – 28) fastening the Record Lever Bracket and remove the Bracket.
4. Pull out the connectors (CN1, 2, 14, 20, 21, 41) and the RT Pin sockets (CN45, CN49 and CN50) which are in nine places and remove the arranged lead wires.
5. Remove the small Belt from the Counter.
6. The Chassis is removed from the unit by unscrewing the four screws (54 – 57) fastening the Chassis.



7. Reassemble in the reverse order.

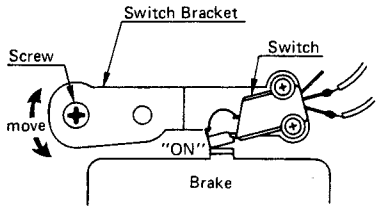
MECHANICAL ADJUSTMENT

GENERAL REMARKS

Before adjusting the mechanism of this unit, wipe the tape contacting surfaces clean as well as the contacting surfaces of the driving parts with a soft cloth soaked in alcohol.
Trouble may occur because of oil and grease stains.

REEL MOTOR SWITCH ADJUSTMENT

1. The Reel Motor Switch should be "ON" the moment either one of the Pinch Rollers start rotating or immediately before the rotation, while the PLAY button is being pressed.
2. If necessary, loosen the screw fastening the Switch Bracket and adjust the switch position by sliding the Bracket as illustrated.

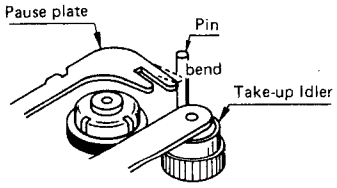


3. After the adjustment, tighten the screw and check to see that the Reel Motor Switch is turned on by pressing the F. FWD and REW buttons.
4. After checking, secure the screw with paint or glue.

PAUSE ADJUSTMENT

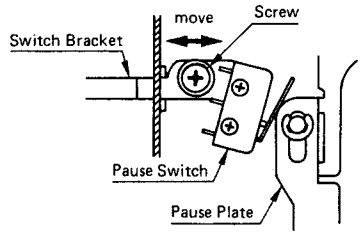
A. PAUSE TIMING ADJUSTMENT

1. Press the PAUSE button slowly with the unit in the playback mode.
2. The Take-up Reel should stop rotating:
   a) At the SAME TIME while the second Pinch Roller stops rotating after it's separation from the Capstan.
   b) IMMEDIATELY after the second Pinch Roller stops rotating.
3. If necessary, adjust the clearance between the Pause Plate and the Pin of the Take-up Idler by bending the Pause Plate as illustrated.



B. PAUSE SWITCH POSITION ADJUSTMENT

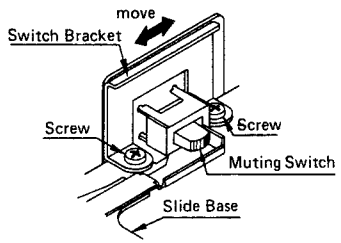
1. Press the PAUSE button slowly with the unit in the playback mode.
2. After the rotation of the Take-up Reel stops, the Reel Motor rotation should stop.
3. If necessary, loosen the screw fastening the Switch Bracket with the PAUSE button down in the playback mode.
   Then, slide the Switch Bracket as illustrated to the position where the Reel Motor stops.



4. After the adjustment, tighten the screw and secure it with paint or glue.

MUTING SWITCH ADJUSTMENT

1. Loosen the screws fastening the Switch Bracket with the unit in the playback mode.
2. Slide the Switch Bracket as illustrated until the Muting Switch is changed over.



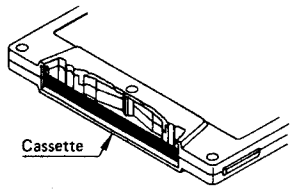
NOTE:
Avoid moving the Slide Base by sliding the Switch Bracket forcibly.

3. After the adjustment, tighten the screws and secure them with paint or glue.

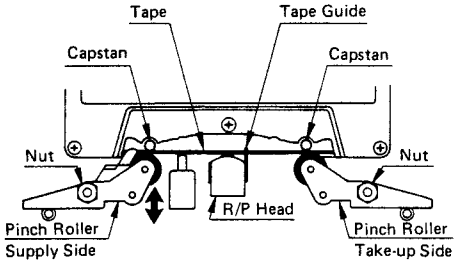
MECHANICAL ADJUSTMENT (Continued)

APE RUNNING CONDITION ADJUSTMENT

Insert the Cassette Tape as described below into the unit and set the unit in the playback mode.
We recommend "TDK C-120SA" cassette tape for this adjustment.

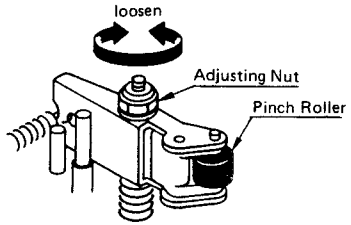


Pull the Pinch Roller of the supply side away from the Capstan as illustrated and check to see that the tape is curling with the Tape Guide of the Playback Head.
Bring the Pinch Roller of the supply side into the Capstan as illustrated and check to see that the tape is curling with the Tape Guide of the Playback Head.



If necessary, adjust the Tape Running Condition by the following procedures:

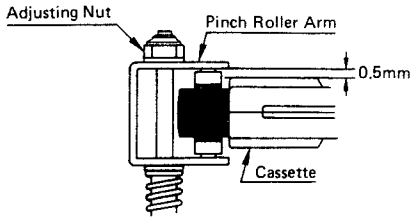
A. When the tape is curling at the upper section of the Tape Guide fo the Playback Head, turn the adjusting nut of the Pinch Roller clockwise as illustrated until the curling is released.
B. When the tape is curling at the lower section of the Tape Guide, turn the nut counter-clockwise as illustrated until the curling is released.



PINCH ROLLER HEIGHT ADJUSTMENT

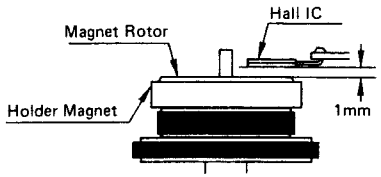
If the Pinch Roller located on the take-up side is removed and replaced, adjust its height by the following procedures.

1. Insert the cassette into the compartment and set the unit in the playback mode.
2. Turn the adjusting nut until the clearance of about 0.5mm is obtained between the Pinch Roller Arm and the cassette as illustrated.

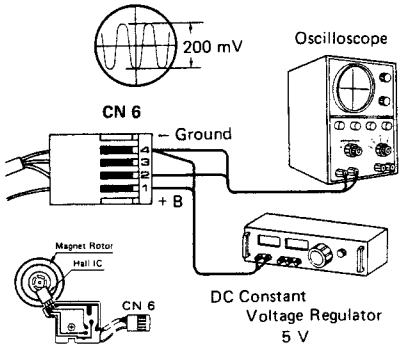


HALL IC MOUNTING

1. Mount the Hall IC parallel to the Magnet Rotor as illustrated.
2. Obtain the clearance of less than 1mm between the Hall IC and the Magnet Rotor as illustrated.



3. Pull out the connector (CN6) from the Control Circuit P.C.B., and connect a constant-voltage regulator and an oscilloscope to the connector as illustrated.



4. Set the constant-voltage regulator to 5V, DC and slowly turn the Magnet Rotor.
5. Check to see that the wave form is more than 200 mV peak-to-peak on the oscilloscope.

ELECTRICAL ADJUSTMENT

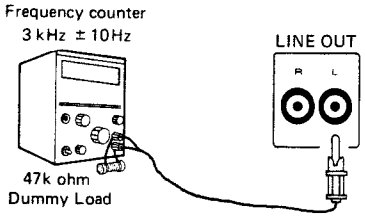
Prior to the Electrical Adjustments, set the unit and the measuring instruments as follows:

- INPUT SELECT Switch . . . . . LINE
- MONITOR Switch . . . . . TAPE
- DOLBY FM Switch . . . . . OFF
- DOLBY NR Switch . . . . . OFF
- BIAS Switch . . . . . NORMAL
- EQUALIZER Switch . . . . . NORMAL
- LIMITER Switch . . . . . OFF
- OUTPUT LEVEL CONTROL . . . . . MAXIMUM
- Audio Signal Generator Output Level . . . 1 kHz, 0dB 1V
- Connect a 47k ohm dummy load to a VTVM and then, to a frequency counter.

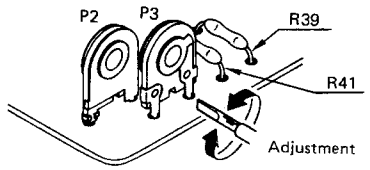
NOTE:
Disconnect the dummy load from the VTVM when connecting the VTVM to a test point.
The Electrical Adjustments should be performed in the order as described below.

TAPE SPEED ADJUSTMENT (MAIN MOTOR)

1. Connect a frequency counter to the left or right channel LINE OUT as illustrated and play back a 3 kHz test tape (Example: TEAC MTT-111).



2. Adjust the tape speed by turning the potentiometers (P2 and P3) in the Control Circuit P.C.B. indicated in the illustration to obtain 3,000 Hz ±10 Hz on the frequency counter.
   POTENTIOMETER (P2) . . . . For rough adjustment
   POTENTIOMETER (P3) . . . . . For fine adjustment

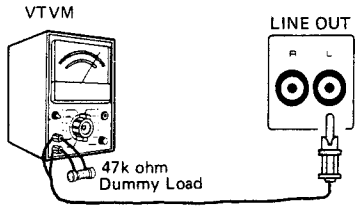


FAST-FORWARD & REWIND TIME ADJUSTMENT (REEL MOTOR)

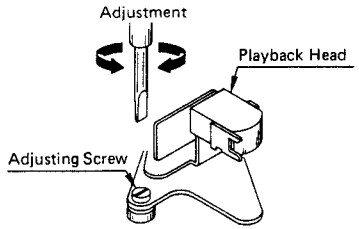
1. Insert a cassette tape (C-60) into the cassette compartment and measure the fast-forward and rewind time with the unit in each mode.
   Each time should be approximately 90 sec.
2. If necessary, adjust the potentiometer (P1) in the Control Circuit P.C.B. to obtain the specified time.

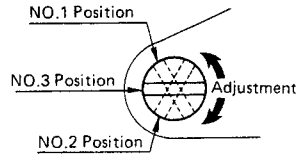
PLAYBACK HEAD AZIMUTH ADJUSTMENT

1. Connect a VTVM to the left channel LINE OUT as illustrated and play back a 12.5 kHz test tape (Example: TEAC MTT-116U).
2. Turn the azimuth adjusting screw to obtain the maximum reading on the VTVM. (No.1 position)
3. Disconnect the VTVM from the left channel LINE OUT and connect it to the right channel LINE OUT.
   Then, turn the adjusting screw to obtain the maximum reading on the VTVM. (No.2 position)



4. Turn the adjusting screw to the center of the No.1 and No.2 positions as illustrated. (No.3 position)

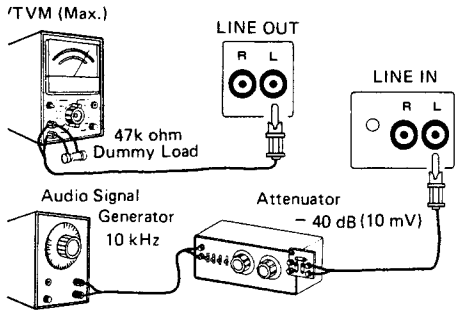




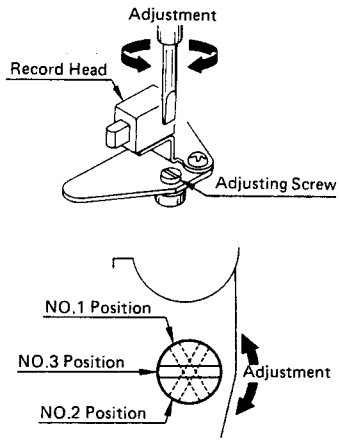
5. Repeat the above described adjustment several times and adjust the azimuth correctly.
6. After the adjustment, secure the adjusting screw with paint or glue.

:CORDING HEAD AZIMUTH ADJUSTMENT

Connect an audio signal generator and an attenuator to the left channel LINE IN and a VTVM to the left channel LINE OUT as illustrated.
Then, turn the INPUT LEVEL controls to the maximum position.



While recording a 10 kHz signal on a normal tape (Example: BASF TP-18LHS) at −40 dB (10 mV) below 0 VU DOLBY mark, turn the azimuth adjusting screw to obrain the maximum reading on the VTVM. (No.1 position)
Disconnect the measuring instruments from the left channel LINE IN and LINE OUT.
Connect them to the right channel LINE IN and LINE OUT.
Keeping the unit in the recording mode, turn the adjusting screw to obtain the maximum reading on the VTVM. (No.2 position)
Turn the adjusting screw to the center of the No.1 and No.2 positions as illustrated. (No.3 position)

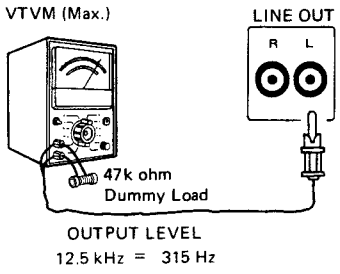


Repeat the above described adjustment several times and adjust the azimuth correctly.
After the adjustment, secure the adjusting screw with paint or glue.

PLAYBACK FREQUENCY RESPONSE ADJUSTMENT

LEFT CHANNEL

1. Connect a VTVM to the left channel LINE OUT as illustrated and play back a test tape (Example: TEAC MTT-116U) where the 315 Hz and 12.5 kHz signals are recorded.



2. Adjust the potentiometer (P101) until the 12.5 kHz signal output becomes identical to the 315 Hz signal output or the deviation is ±1 dB.

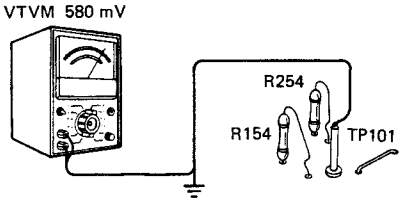
RIGHT CHANNEL

Adjust the potentiometer (P201) by using the same procedure.

PLAYBACK GAIN ADJUSTMENT

LEFT CHANNEL

1. Connect a VTVM to the test point (TP101) as illustrated and play back a test tape for the DOLBY level adjustment (Example: TEAC MTT-150).
2. Adjust the potentiometer (P102) to obtain the output of 580 mV on the VTVM.



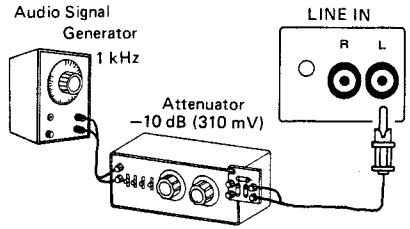
RIGHT CHANNEL

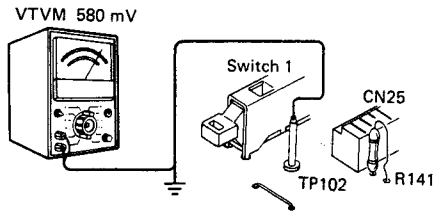
Connect the VTVM to the test point (TP201) and adjust the potentiometer (P202) by using same procedure.

OUTPUT LEVEL & METER ADJUSTMENT

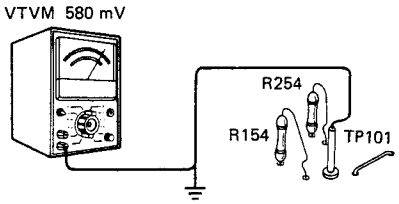
LEFT CHANNEL

1. Connect an audio signal generator and an attenuator to the left channel LINE IN, and a VTVM to the test point (TP102) as illustrated.

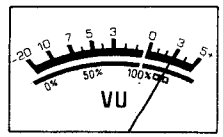




2. Set the MONITOR switch to SOURCE and feed a 1 kHz signal from the audio signal generator at −10 dB (310 mV) to the unit.
3. Turn the left channel INPUT LEVEL control (VR3) until the VTVM reading becomes the output of 580 mV.
4. Disconnect the VTVM from the test point (TP102) and connect it to the test point (TP101) as illustrated.



5. Adjust the potentiometer (P106) until the pointer of the left channel METER is positioned to +3 VU as illustrated.



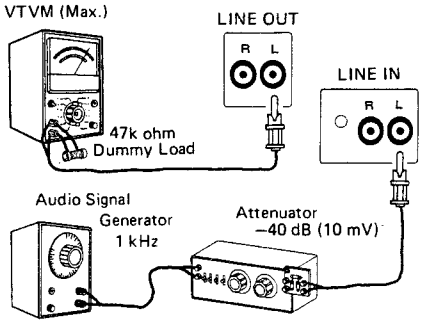
RIGHT CHANNEL

Connect the audio signal generator and the attenuator to the right channel LINE IN, and the VTVM to the test points (TP202 and TP201) alternately.
Then, adjust the right channel INPUT LEVEL control (VR4) and the potentiometers (P206 and P203) by following the same procedure as for the left channel.

RECORDING BIAS ADJUSTMENT

LEFT CHANNEL

1. Connect an audio signal generator and an attenuator to the left channel LINE IN and a VTVM to the left channel LINE OUT as illustrated.



2. Set the BIAS and EQUALIZER switches to CrO2.
Then, insert a chromium dioxide tape (Example: BASF TP-18CrO2) into the cassette compartment and set the unit in the recording mode.
3. Feed a 1 kHz signal from the audio signal generator at −40 dB (10 mV) to the unit and read the output level on the VTVM.
4. Set the signal generator at 14 kHz and adjust the potentiometer (P104), so that the output level becomes −1 dB ±1 dB compared with the 1 kHz signal output level.
5. Repeat the above adjustment several times and until an optimum is reached.

RIGHT CHANNEL

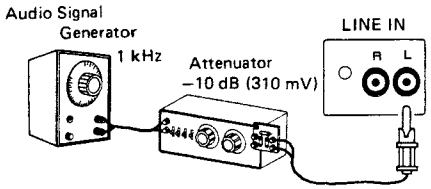
Adjust the potentiometer (P204) by using the same procedure.

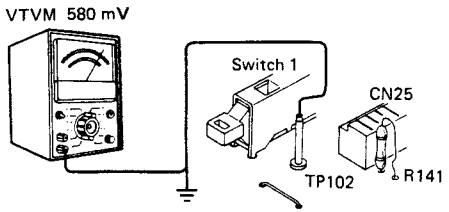
ELECTRICAL ADJUSTMENT (Continued)

CORDING GAIN ADJUSTMENT

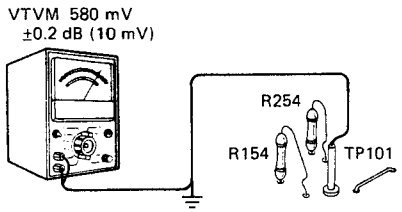
LEFT CHANNEL

Connect an audio signal generator and an attenuator to the left channel LINE IN and a VTVM to the test point (TP102) as illustrated.





Set the MONITOR switch to SOURCE and feed a 1 kHz signal at −10 dB (310 mV) to the unit.
Adjust the left channel INPUT LEVEL control (VR3) to for a 580 mV on the VTVM.
Disconnect the VTVM from the test point (TP102) and connect it to the test point (TP101).
Then, set the BIAS and EQUALIZER switches to CrO2 and the MONITOR switch to TAPE. Adjust the potentiometer (P105) to obtain 580 mV ±0.2 dB (10 mV) on the VTVM while the signal is being recorded on a chromium dioxide tape (Example: BASF TP-18CrO2).



5. Repeat the above adjustment several times until an optimum is reached.

RIGHT CHANNEL

Connect an audio signal generator and an attenuator to the right channel LINE IN and a VTVM to the test points (TP202 and TP201) alternately.
Then, adjust the INPUT LEVEL control (VR4) and the potentiometer (P205) by following the same procedure as for the left channel.

MEMO

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	141 6 1419 31901	Individual Carton	1
	141 6 1449 46300	Pad	1
	141 6 1449 46301	Pad	1
	141 6 2519 07290	Poly Cover	1
	141 6 2519 10025	Poly Cover	1
	141 6 2519 24033	Poly Cover	1
	141 6 3119 17500	Inner Cushion	2
	141 6 3119 17600	Pad	1
	141 6 4559 00100	Serial No. Sheet	1
	141 6 4559 02300	Serial No. Sheet	1
	ACCESSORIES		
	4 2369 72290	DIN to DIN Cord	1
	141 6 2519 10021	Poly Cover	1
	141 6 4119 62903	Instruction Manual	1
	141 6 4519 19400	Warranty Card	1
	141 6 4519 19401	Warranty Card	1
	141 6 4729 07700	Caution Label	1
	CABINET		
	4 2269 78640	P.C.B. Indicator	1
05	202 5 9160 71210	Diode, SLP-712 (Peak Indicator)	1
205	202 5 9160 71210	Diode, SLP-712 (Peak Indicator)	1
	4 2359 70580	DIN Socket 5P	1
	4 2379 70600	Earth Terminal	1
	131 2 1801 13200	Leg	4
	141 0 1119 42701	Front Panel Complete	1
	141 0 1119 44100	Wooden Cabinet Assy	1
	141 0 1249 09100	Cassette Lid Assy	1
	141 0 1619 19200	Knob Assy	1
	141 0 1629 00800	Knob Assy	8
	141 2 1119 41503	Back Panel	1
	141 2 1639 18700	Knob	4
	141 2 2419 18300	Screen	6
	141 2 2449 22000	Panel Sheet	1
	141 2 4469 21900	Cushion	1
	141 2 4569 06300	Washer	4
	101 3 1304 01011	Screw, Pan Hd. +M4.0x10	4
	131 3 1303 00618	Screw, Pan Hd. C SW +M3.0x6	5
	101 3 1202 60611	Screw, Flat Hd. +M2.6x6	3
	131 3 1303 00811	Screw, Pan Hd. C SW +M3.0x8	9
	101 3 1304 01418	Screw, Pan Hd. +M4.0x14	4
	101 3 1202 60818	Screw, Flat Hd. +M2.6x8	2
	106 3 1103 00123	Nut-1 M3.0	1
	110 3 3203 00082	Tooth Outer Washer-B M3.0	1
	141 2 4579 03000	Washer	1
	101 3 1302 60418	Screw, Pan Hd. +M2.6x4	2
	101 3 1702 00518	Screw, Bind Hd. +M2.0x5	2
	106 3 1102 00323	Nut-1 M2.0	2
	SWITCH CIRCUIT P.C.B. ASSY		
	4 1329 73470	Switch Circuit P.C.B. Assy	1
18	CM1 8 2500 K00SV	Mylar 0.0018MF 50V ±10%	1
218	CM1 8 2500 K00SV	Mylar 0.0018MF 50V ±10%	1
1	4 2319 71144	Slide Switch (De-emphasis SW)	1
V27	4 2369 71570	Connector 4P	1
	AMP BASE P.C.B. ASSY		
	4 1329 73062	Amplifier Base P.C.B. Assy	1
V37	4 1329 73120	Connecting Circuit P.C.B. Assy	1
V38	4 1329 73131	Connecting Circuit P.C.B. Assy	1
V39	4 1329 73150	Connecting Circuit P.C.B. Assy	1
V12	4 2369 71480	Connector 3P	1
V13	4 2369 71480	Connector 3P	1
V14	4 2369 71480	Connector 3P	1
V15	4 2369 71480	Connector 3P	1
V16	4 2369 71480	Connector 3P	1
V17	4 2369 71480	Connector 3P	1
V18	4 2369 71480	Connector 3P	1
V19	4 2369 71480	Connector 3P	1
V20	4 2369 71850	Connector 4P	1
V21	4 2369 71850	Connector 4P	1
V22	4 2369 71480	Connector 3P	1

Ref. No.	Part No.	Description	Q'ty
	AMP BASE P.C.B. ASSY		
CN23	4 2369 71480	Connector 3P	1
CN24	4 2369 71480	Connector 3P	1
CN25	4 2359 71600	Connector 6P	4
CN26	4 2359 72390	Connector 10P	1
CN34	4 2369 71850	Connector 4P	1
CN35	4 2369 71480	Connector 3P	1
CN36	4 2369 71480	Connector 3P	1
CN40	4 2359 71600	Connector 3P	1
C101	CC6 8 1500 KE00C	Ceramic 680PF 50V ±10%	1
C102	CM5 6 3500 K00SV	Mylar 0.056MF 50V ±10%	1
C103	CM1 2 3500 K00SV	Mylar 0.012MF 50V ±10%	1
C104	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C105	CC1 0 1500 KE00C	Ceramic 100PF 50V ±10%	1
C106	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C107	CA4 7 4100 M000V	Aluminum 0.47MF 10V ±20%	1
C108	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C109	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C110	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C111	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C113	CD1 0 5160 0000V	Electrolytic 1MF 16V	1
C114	CD1 0 5160 0000V	Electrolytic 1MF 16V	1
C115	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C116	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C117	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C119	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C120	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C121	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C122	CD2 2 5100 0000V	Electrolytic 2.2MF 10V	1
C123	CA2 2 4100 M000V	Aluminum 0.22MF 10V ±20%	1
C124	CM1 5 2500 K00SV	Mylar 0.0015MF 50V ±10%	1
C125	CC1 0 1500 KE00C	Ceramic 100PF 50V ±10%	1
C126	CC1 0 1500 KE00C	Ceramic 100PF 50V ±10%	1
C127	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C128	CD4 7 6250 0000V	Electrolytic 47MF 25V	1
C201	CC6 8 1500 KE00C	Ceramic 680PF 50V ±10%	1
C202	CM5 6 3500 K00SV	Mylar 0.056MF 50V ±10%	1
C203	CM1 2 3500 K00SV	Mylar 0.012MF 50V ±10%	1
C204	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C205	CC1 0 1500 KE00C	Ceramic 100PF 50V ±10%	1
C206	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C207	CA4 7 4100 M000V	Aluminum 0.47MF 10V ±20%	1
C208	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C209	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C210	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C211	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C213	CD1 0 5160 0000V	Electrolytic 1MF 16V	1
C214	CD1 0 5160 0000V	Electrolytic 1MF 16V	1
C215	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C216	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C217	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C219	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C220	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C221	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C222	CD2 2 5100 0000V	Electrolytic 2.2MF 10V	1
C223	CA2 2 4100 M000V	Aluminum 0.22MF 10V ±20%	1
C224	CM1 5 2500 K00SV	Mylar 0.0015MF 50V ±10%	1
C225	CC1 0 1500 KE00C	Ceramic 100PF 50V ±10%	1
C226	CC1 0 1500 KE00C	Ceramic 100PF 50V ±10%	1
C227	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C301	CD3 3 7250 0000V	Electrolytic 330MF 25V	1
C302	CD4 7 7250 0000V	Electrolytic 470MF 25V	1
C303	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C304	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
D101	4 2029 70160	Diode, 1S953	1
D102	202 5 9110 18810	Diode, 1S188-AM	1
D103	4 2029 70160	Diode, 1S953	1
D104	4 2029 70160	Diode, 1S953	1
D201	4 2029 70160	Diode, 1S953	1
D202	202 5 9110 18810	Diode, 1S188-AM	1
D203	4 2029 70160	Diode, 1S953	1
D204	4 2029 70160	Diode, 1S953	1
J1	4 2359 72170	Jack 2P (LINE IN S19)	1
J2	4 2359 72170	Jack 2P (LINE OUT)	1

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	AMP BASE P.C.B. ASSY		
L101	4 2729 70180	Coil (36 mH)	1
L201	4 2729 70181	Coil (36 mH)	1
P101	4 2229 72890	Potentiometer (B-3.3k)	1
P102	4 2229 72570	Potentiometer (B-10k)	1
P103	4 2229 72570	Potentiometer (B-10k)	1
P105	4 2229 72570	Potentiometer (B-10k)	1
P106	4 2229 72570	Potentiometer (B-10k)	1
P201	4 2229 72890	Potentiometer (B-3.3k)	1
P202	4 2229 72570	Potentiometer (B-10k)	1
P203	4 2229 72570	Potentiometer (B-10k)	1
P205	4 2229 72570	Potentiometer (B-10k)	1
P206	4 2229 72570	Potentiometer (B-10k)	1
Q101	4 2039 70101	Transistor, 2SC945	1
Q102	203 5 5100 69352	Transistor, 2SC693	1
Q103	4 2039 70101	Transistor, 2SC945	1
Q104	203 5 5100 53650	Transistor, 2SC536	1
Q105	203 5 5100 69352	Transistor, 2SC693	1
Q106	4 2039 70101	Transistor, 2SC945	1
Q107	203 5 5100 69352	Transistor, 2SC693	1
Q108	203 5 5100 69352	Transistor, 2SC693	1
Q109	4 2039 70101	Transistor, 2SC945	1
Q110	203 5 5100 53650	Transistor, 2SC536	1
Q111	4 2039 70101	Transistor, 2SC945	1
Q112	4 2039 70101	Transistor, 2SC945	1
Q201	4 2039 70101	Transistor, 2SC945	1
Q202	203 5 5100 69352	Transistor, 2SC693	1
Q203	4 2039 70101	Transistor, 2SC945	1
Q204	203 5 5100 53650	Transistor, 2SC536	1
Q205	203 5 5100 69352	Transistor, 2SC693	1
Q206	4 2039 70101	Transistor, 2SC945	1
Q207	203 5 5100 69352	Transistor, 2SC693	1
Q208	203 5 5100 69352	Transistor, 2SC693	1
Q209	4 2039 70101	Transistor, 2SC945	1
Q210	203 5 5100 53650	Transistor, 2SC536	1
Q211	4 2039 70101	Transistor, 2SC945	1
Q212	4 2039 70101	Transistor, 2SC945	1
R101	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R102	RD8 2 3251 KV000	Carbon 82k ohm 1/4W ±10%	1
R103	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R104	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R105	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R106	RD2 2 4251 KV000	Carbon 220k ohm 1/4W ±10%	1
R107	RD2 2 3251 KV000	Carbon 22k ohm 1/4W ±10%	1
R108	RD4 7 2251 KV000	Carbon 4.7k ohm 1/4W ±10%	1
R109	RD2 2 1251 KV000	Carbon 220 ohm 1/4W ±10%	1
R110	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R111	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R112	RD1 8 1251 KV000	Carbon 180 ohm 1/4W ±10%	1
R113	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R114	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R115	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R116	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R117	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R118	RD1 2 2251 KV000	Carbon 1.2k ohm 1/4W ±10%	1
R119	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R120	RD2 2 4251 KV000	Carbon 220k ohm 1/4W ±10%	1
R121	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R122	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1
R123	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R124	RD5 6 4251 KV000	Carbon 560k ohm 1/4W ±10%	1
R125	RD3 3 4251 KV000	Carbon 330k ohm 1/4W ±10%	1
R126	RD1 8 4251 KV000	Carbon 180k ohm 1/4W ±10%	1
R127	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R128	RD8 2 2251 KV000	Carbon 8.2k ohm 1/4W ±10%	1
R129	RD2 2 4251 KV000	Carbon 220k ohm 1/4W ±10%	1
R130	RD2 7 4251 KV000	Carbon 270k ohm 1/4W ±10%	1
R131	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R132	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R133	RD1 2 1251 KV000	Carbon 120 ohm 1/4W ±10%	1
R134	RD3 9 3251 KV000	Carbon 39k ohm 1/4W ±10%	1
R137	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R138	RD1 8 1251 KV000	Carbon 180 ohm 1/4W ±10%	1
R139	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1

Ref. No.	Part No.	Description	Q'ty
	AMP BASE P.C.B. ASSY		
R140	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R141	RD1 5 5251 KV000	Carbon 1.5M ohm 1/4W ±10%	1
R142	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R143	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R144	RD8 2 2251 KV000	Carbon 8.2k ohm 1/4W ±10%	1
R145	RD4 7 3251 KV000	Carbon 47k ohm 1/4W ±10%	1
R146	RD1 0 1251 KV000	Carbon 100 ohm 1/4W ±10%	1
R147	RD1 8 2251 KV000	Carbon 1.8k ohm 1/4W ±10%	1
R148	RD4 7 2251 KV000	Carbon 4.7k ohm 1/4W ±10%	1
R149	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R150	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R151	RD1 0 0251 KV000	Carbon 10 ohm 1/4W ±10%	1
R152	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R153	RD5 6 3251 KV000	Carbon 56k ohm 1/4W ±10%	1
R154	RD1 5 5251 KV000	Carbon 1.5M ohm 1/4W ±10%	1
R155	RD6 8 2251 KV000	Carbon 6.8k ohm 1/4W ±10%	1
R157	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R201	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R202	RD8 2 3251 KV000	Carbon 82k ohm 1/4W ±10%	1
R203	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R204	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R205	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R206	RD2 2 4251 KV000	Carbon 220k ohm 1/4W ±10%	1
R207	RD2 2 3251 KV000	Carbon 22k ohm 1/4W ±10%	1
R208	RD4 7 2251 KV000	Carbon 4.7k ohm 1/4W ±10%	1
R209	RD2 2 1251 KV000	Carbon 220 ohm 1/4W ±10%	1
R210	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R211	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R212	RD1 8 1251 KV000	Carbon 180 ohm 1/4W ±10%	1
R213	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R214	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R215	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R216	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R217	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R218	RD1 2 2251 KV000	Carbon 1.2k ohm 1/4W ±10%	1
R219	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R220	RD2 2 4251 KV000	Carbon 220k ohm 1/4W ±10%	1
R221	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R222	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1
R223	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R224	RD5 6 4251 KV000	Carbon 560k ohm 1/4W ±10%	1
R225	RD3 3 4251 KV000	Carbon 330k ohm 1/4W ±10%	1
R226	RD1 8 4251 KV000	Carbon 180k ohm 1/4W ±10%	1
R227	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R228	RD8 2 2251 KV000	Carbon 8.2k ohm 1/4W ±10%	1
R229	RD2 2 4251 KV000	Carbon 220k ohm 1/4W ±10%	1
R230	RD2 7 4251 KV000	Carbon 270k ohm 1/4W ±10%	1
R231	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R232	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R233	RD1 2 1251 KV000	Carbon 120 ohm 1/4W ±10%	1
R234	RD3 9 3251 KV000	Carbon 39k ohm 1/4W ±10%	1
R237	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R238	RD1 8 1251 KV000	Carbon 180 ohm 1/4W ±10%	1
R239	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R240	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R241	RD1 5 5251 KV000	Carbon 1.5M ohm 1/4W ±10%	1
R242	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R243	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R244	RD8 2 2251 KV000	Carbon 8.2k ohm 1/4W ±10%	1
R245	RD4 7 3251 KV000	Carbon 47k ohm 1/4W ±10%	1
R246	RD1 0 1251 KV000	Carbon 100 ohm 1/4W ±10%	1
R247	RD1 8 2251 KV000	Carbon 1.8k ohm 1/4W ±10%	1
R248	RD4 7 2251 KV000	Carbon 4.7k ohm 1/4W ±10%	1
R249	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R250	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R251	RD1 0 0251 KV000	Carbon 10 ohm 1/4W ±10%	1
R252	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R253	RD5 6 3251 KV000	Carbon 56k ohm 1/4W ±10%	1
R254	RD1 5 5251 KV000	Carbon 1.5M ohm 1/4W ±10%	1
R255	RD6 8 2251 KV000	Carbon 6.8k ohm 1/4W ±10%	1
R257	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R302	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1
R303	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1

PARTS LIST

As for the contents of each assembly marked with (A) (B) and (C), please refer to [A] [B] and [C]

Ref. No.	Part No.	Description	Q'ty
	AMP BASE P.C.B. ASSY		
309	RH2 2 1102 KH000	Metal 220 ohm 1W ±10%	1
1	4 2319 72630	Slide Switch (Rec/PB)	1
2	4 2319 72630	Slide Switch (Rec/PB)	1
3	4 2319 72460	Switch Lever (Monitor)	1
4	4 2319 72480	Switch Lever (DOLBY FM)	1
5	4 2319 72470	Switch Lever (DOLBY NR)	1
6	4 2319 72450	Switch Lever (Bias)	1
7	4 2319 72450	Switch Lever (EQ)	1
N1	4 1329 73070	Pre-Amplifier Unit P.C.B. Assy (A)	1
N2	4 1329 73052	DOLBY NR Unit P.C.B. Assy (B)	1
N3	4 1329 73052	DOLBY NR Unit P.C.B. Assy (B)	1
N4	4 1329 73080	Line Amplifier Unit P.C.B. Assy (C)	1
N6	4 1329 73052	DOLBY NR Unit P.C.B. Assy (B)	1
N7	4 1329 73052	DOLBY NR Unit P.C.B. Assy (B)	1
N8	4 1329 73080	Line Amplifier Unit P.C.B. Assy (C)	1
N9	4 1329 73090	Record Amplifier Unit P.C.B. Assy	1
R5	4 2229 71590	Volume Control (DOLBY FM Adj.)	1
	141 2 3779 10600	Clamp P.C.B.	4
	4 2369 70740	RT Pin	12
	141 2 4729 04700	Staple 10	27
N27	4 2359 72891	Connector 4P Assy	1
N3	4 2359 73292	Connector 3P Assy	1
	CONNECTING CIRCUIT P.C.B. ASSY		
	4 1329 73120	Connecting Circuit P.C.B. Assy	1
	4 2369 71430	Connector 10P	1
	4 2369 71750	Connector 3P	1
	4 2369 71740	Connector 4P	1
N41	4 2369 71440	Connector 6P	1
305	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
104	4 2229 72790	Potentiometer (Bias Adj., B-100k)	1
204	4 2229 72790	Potentiometer (Bias Adj., B-100k)	1
312	RH1 5 1102 KH000	Metal 150 ohm 1W ±10%	1
313	RH1 8 1102 KH000	Metal 180 ohm 1W ±10%	1
314	RH2 2 1102 KH000	Metal 220 ohm 1W ±10%	1
315	RH2 7 1102 KH000	Metal 270 ohm 1W ±10%	1
316	RH3 3 1102 KH000	Metal 330 ohm 1W ±10%	1
317	RH3 9 1102 KH000	Metal 390 ohm 1W ±10%	1
318	RH4 7 1102 KH000	Metal 470 ohm 1W ±10%	1
319	RH5 6 1102 KH000	Metal 560 ohm 1W ±10%	1
320	RH6 8 1102 KH000	Metal 680 ohm 1W ±10%	1
N11	4 2589 71220	OSC Block	1
	4 2369 70740	RT Pin	1
	CONNECTING CIRCUIT P.C.B. ASSY		
	4 1329 73131	Connecting Circuit P.C.B. Assy	1
N29	4 2359 72200	Connector 4P	1
306	RH5 6 0102 KH000	Metal 56 ohm 1W ±10%	1
307	RH5 6 0102 KH000	Metal 56 ohm 1W ±10%	1
308	RH5 6 0102 KH000	Metal 56 ohm 1W ±10%	1
	4 2369 71780	Connector 8P	1
	4 2369 71790	Connector 12P	1
	141 2 4729 04700	Staple 10	2
	CONNECTING CIRCUIT P.C.B. ASSY		
	4 1329 73150	Connecting Circuit P.C.B. Assy	1
	4 2369 71770	Connector 8P	1
N28	4 2369 71740	Connector 4P	1
	4 2369 71430	Connector 10P	1
	PRE-AMP UNIT P.C.B. ASSY [A]		
	4 1329 73070	Pre-Amplifier Unit P.C.B. Assy	1
	4 2369 71520	Connector 9P	1
101	CD4 7 6100 0000V	Electrolytic 47MF 10V	1
102	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
103	CC4 7 1500 KE00C	Ceramic 470PF 50V ±10%	1
104	CC6 8 0500 KE00C	Ceramic 68PF 50V ±10%	1
105	CD4 7 663A 0000V	Electrolytic 47MF 6.3V	1
106	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
107	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
201	CD4 7 6100 0000V	Electrolytic 47MF 10V	1
202	CD1 0 6100 0000V	Electrolytic 10MF 10V	1
203	CC4 7 1500 KE00C	Ceramic 470PF 50V ±10%	1

Ref. No.	Part No.	Description	Q'ty
	PRE-AMP UNIT P.C.B. ASSY [A]		
C204	CC6 8 0500 KE00C	Ceramic 68PF 50V ±10%	1
C205	CD4 7 663A 0000V	Electrolytic 47MF 6.3V	1
C206	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C207	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
Q101	203 5 5100 69362	Transistor, 2SC693	1
Q102	203 5 5100 69362	Transistor, 2SC693	1
Q201	203 5 5100 69362	Transistor, 2SC693	1
Q202	203 5 5100 69362	Transistor, 2SC693	1
R101	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R102	RD2 2 1251 KV000	Carbon 220 ohm 1/4W ±10%	1
R103	RD2 2 3251 KV000	Carbon 22k ohm 1/4W ±10%	1
R104	RD6 8 2251 KV000	Carbon 6.8k ohm 1/4W ±10%	1
R105	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R106	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R201	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R202	RD2 2 1251 KV000	Carbon 220 ohm 1/4W ±10%	1
R203	RD2 2 3251 KV000	Carbon 22k ohm 1/4W ±10%	1
R204	RD6 8 2251 KV000	Carbon 6.8k ohm 1/4W ±10%	1
R205	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R206	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
	141 2 4729 04700	Staple 10	2
	DOLBY NR UNIT P.C.B. ASSY [B]		
	4 1329 73052	DOLBY NR Unit P.C.B. Assy	1
CN25	4 2369 71090	Connector 6P	1
C1	CD1 0 5100 0000V	Electrolytic 1MF 10V	1
C2	CD2 2 7160 0000V	Electrolytic 220MF 16V	1
C3	CC8 2 0500 KE00C	Ceramic 8.2PF 50V ±10%	1
C4	CM3 9 2500 K00SV	Mylar 0.0039MF 50V ±10%	1
C5	CM3 3 2500 K00SV	Mylar 0.0033MF 50V ±10%	1
C6	CM2 2 2500 K00SV	Mylar 0.0022MF 50V ±10%	1
C7	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C8	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C9	CM5 6 2500 K00SV	Mylar 0.0056MF 50V ±10%	1
C10	CM4 7 2500 K00SV	Mylar 0.0047MF 50V ±10%	1
C11	CM2 7 3500 K00SV	Mylar 0.027MF 50V ±10%	1
C12	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C13	CM4 7 3500 K00SV	Mylar 0.047MF 50V ±10%	1
C14	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C15	CA1 0 4100 K000V	Aluminum 0.1MF 10V ±10%	1
C16	CA3 3 4100 K000V	Aluminum 0.33MF 10V ±10%	1
IC1	4 2069 70210	IC, NE645	1
L1	4 2729 70180	Coil (36 mH)	1
L2	4 2729 70170	Coil (23 mH)	1
R1	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R2	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R3	RD1 8 1251 KV000	Carbon 180 ohm 1/4W ±10%	1
R4	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
R5	RD4 7 3251 KV000	Carbon 47k ohm 1/4W ±10%	1
R6	RD2 0 4251 KV000	Carbon 200k ohm 1/4W ±10%	1
R7	RD2 7 4251 KV000	Carbon 270k ohm 1/4W ±10%	1
	LINE-AMP UNIT P.C.B. ASSY [C]		
	4 1329 73080	Line Amplifier Unit P.C.B. Assy	1
	4 2369 71520	Connector 9P	1
C101	CD4 7 6250 0000V	Electrolytic 47MF 25V	1
C102	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C103	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C104	CC1 2 1500 KE00C	Ceramic 120PF 50V ±10%	1
C105	CD4 7 663A 0000V	Electrolytic 47MF 6.3V	1
C201	CD4 7 6250 0000V	Electrolytic 47MF 25V	1
C202	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C203	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C204	CC1 2 1500 KE00C	Ceramic 120PF 50V ±10%	1
C205	CD4 7 663A 0000V	Electrolytic 47MF 6.3V	1
Q101	203 5 5100 69362	Transistor, 2SC693	1
Q102	203 5 5100 69362	Transistor, 2SC693	1
Q201	203 5 5100 69362	Transistor, 2SC693	1
Q202	203 5 5100 69362	Transistor, 2SC693	1
R101	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R102	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R103	RD4 7 2251 KV000	Carbon 4.7 ohm 1/4W ±10%	1

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	LINE-AMP UNIT P.C.B. ASSY		
R104	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R105	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R201	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R202	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R203	RD4 7 2251 KV000	Carbon 4.7k ohm 1/4W ±10%	1
R204	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
R205	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
	REC AMP UNIT P.C.B. ASSY		
	4 1329 73090	Record Amplifier Unit P.C.B. Assy	1
CN26	4 2369 71430	Connector 10P	1
C101	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C102	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C103	CD3 3 663A 0000V	Electrolytic 33MF 6.3V	1
C104	CC1 2 1500 KD00C	Ceramic 120PF 50V ±10%	1
C105	CA4 7 4100 M000V	Aluminum 0.47MF 10V ±20%	1
C106	CM1 5 3500 K00SV	Mylar 0.015MF 50V ±10%	1
C107	CM2 7 3500 K00SV	Mylar 0.027MF 50V ±10%	1
C108	CM2 2 2500 K00SV	Mylar 0.0022MF 50V ±10%	1
C109	CM3 3 3500 K00SV	Mylar 0.033MF 50V ±10%	1
C110	CD4 7 6250 0000V	Electrolytic 47MF 25V	1
C201	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C202	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C203	CD3 3 663A 0000V	Electrolytic 33MF 6.3V	1
C204	CC1 2 1500 KD00C	Ceramic 120PF 50V ±10%	1
C205	CA4 7 4100 M000V	Aluminum 0.47MF 10V ±20%	1
C206	CM1 5 3500 K00SV	Mylar 0.015MF 50V ±10%	1
C207	CM2 7 3500 K00SV	Mylar 0.027MF 50V ±10%	1
C208	CM2 2 2500 K00SV	Mylar 0.0022MF 50V ±10%	1
C209	CM3 3 3500 K00SV	Mylar 0.033MF 50V ±10%	1
C210	CD4 7 6250 0000V	Electrolytic 47MF 25V	1
L101	4 2729 70080	Peaking Coil	1
L201	4 2729 70080	Peaking Coil	1
Q101	203 5 5100 69362	Transistor, 2SC693	1
Q102	203 5 5100 69362	Transistor, 2SC693	1
Q103	4 2039 70101	Transistor, 2SC945	1
Q104	4 2039 70101	Transistor, 2SC945	1
Q105	4 2039 70101	Transistor, 2SC945	1
Q106	4 2039 70101	Transistor, 2SC945	1
Q201	203 5 5100 69362	Transistor, 2SC693	1
Q202	203 5 5100 69362	Transistor, 2SC693	1
Q203	4 2039 70101	Transistor, 2SC945	1
Q204	4 2039 70101	Transistor, 2SC945	1
Q205	4 2039 70101	Transistor, 2SC945	1
Q206	4 2039 70101	Transistor, 2SC945	1
R101	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R102	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R103	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R104	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1
R105	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R106	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R107	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R108	RD1 5 3251 KV000	Carbon 15k ohm 1/4W ±10%	1
R109	RD1 2 1251 KV000	Carbon 120 ohm 1/4W ±10%	1
R110	RD8 2 2251 KV000	Carbon 8.2k ohm 1/4W ±10%	1
R111	RD6 8 2251 KV000	Carbon 6.8k ohm 1/4W ±10%	1
R112	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R113	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R114	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R115	RD1 5 3251 KV000	Carbon 15k ohm 1/4W ±10%	1
R116	RD2 7 2251 KV000	Carbon 2.7k ohm 1/4W ±10%	1
R117	RD1 2 3251 KV000	Carbon 12k ohm 1/4W ±10%	1
R201	RD1 0 4251 KV000	Carbon 100k ohm 1/4W ±10%	1
R202	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
R203	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R204	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1
R205	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
R206	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
R207	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
R208	RD1 5 3251 KV000	Carbon 15k ohm 1/4W ±10%	1
R209	RD1 2 1251 KV000	Carbon 120 ohm 1/4W ±10%	1
R210	RD8 2 2251 KV000	Carbon 8.2k ohm 1/4W ±10%	1
R211	RD6 8 2251 KV000	Carbon 6.8k ohm 1/4W ±10%	1

Ref. No.	Part No.	Description	Q'ty
	REC AMP UNIT P.C.B. ASSY		
R212	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R213	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R214	RD2 7 3251 KV000	Carbon 27k ohm 1/4W ±10%	1
R215	RD1 5 3251 KV000	Carbon 15k ohm 1/4W ±10%	1
R216	RD2 7 2251 KV000	Carbon 2.7k ohm 1/4W ±10%	1
R217	RD1 2 3251 KV000	Carbon 12k ohm 1/4W ±10%	1
	REW CIRCUIT P.C.B. ASSY		
	4 1329 73000	Rewind Circuit P.C.B. Assy	1
C20	CD1 0 8160 0000H	Electrolytic 1000MF 16V	1
R54	RH1 2 1102 KH000	Metal 120 ohm 1W ±10%	1
	4 2369 70740	RT Pin	6
CN8	4 2369 71850	Connector 4P	1
CN4	4 2359 73374	Connector 4P Assy	1
	SWITCH P.C.B. ASSY		
	4 1329 73010	Switch P.C.B. Assy	1
S12	4 2319 72580	Slide Switch (Muting)	1
	4 2359 70990	Socket, RT Pin	2
CN7	4 2359 72991	Connector 5P Assy	1
	HALL IC P.C.B. ASSY		
	4 1329 73020	Hall IC P.C.B. Assy	1
C33	CD2 2 7160 0000V	Electrolytic 220MF 16V	1
IC1	4 2069 70190	IC, DN835 (Hall IC)	1
CN6	4 2359 73373	Connector 4P Assy	1
	CONTROL CIRCUIT P.C.B. ASSY		
	4 1329 73030	Control Circuit P.C.B. Assy	1
C12	CD1 0 5160 0000V	Electrolytic 1MF 16V	1
C13	CD1 0 7160 0LL0V	Electrolytic 100MF 16V	1
C14	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C15	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C16	CB1 0 6160 0000V	Non-polar 10MF 16V	1
C17	CC4 7 3500 ZG00C	Ceramic 0.047MF 50V +80, –20%	1
C18	CD4 7 5160 0000V	Electrolytic 4.7MF 16V	1
C19	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C21	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C22	CD1 0 7160 0000V	Electrolytic 100MF 16V	1
C23	CD4 7 6160 0000V	Electrolytic 47MF 16V	1
C24	CC2 2 1500 KD00C	Ceramic 220PF 50V ±10%	1
C25	CB1 0 6160 0000V	Non-polar 10MF 16V	1
C26	CC4 7 3500 ZG00C	Ceramic 0.047MF 50V +80, –20%	1
C27	CM2 2 3500 K00SV	Mylar 0.022MF 50V ±10%	1
C28	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C29	CD4 7 5250 0000V	Electrolytic 4.7MF 25V	1
C30	CD4 7 5250 0000V	Electrolytic 4.7MF 25V	1
C31	CD2 2 7160 0000V	Electrolytic 220MF 16V	1
C32	CM6 8 3500 K00SV	Mylar 0.068MF 50V ±10%	1
D8	4 2029 70160	Diode, 1S953	1
D9	202 5 9410 010101	Diode, 10D-1	1
D10	4 2029 70160	Diode, 1S953	1
D11	4 2029 70160	Diode, 1S953	1
D12	4 2029 70160	Diode, 1S953	1
D13	4 2029 70160	Diode, 1S953	1
D14	4 2029 70160	Diode, 1S953	1
D15	4 2029 70160	Diode, 1S953	1
D16	4 2029 70160	Diode, 1S953	1
D17	4 2029 70160	Diode, 1S953	1
D18	4 2029 70160	Diode, 1S953	1
D19	4 2029 70160	Diode, 1S953	1
D20	202 5 9410 010101	Diode, 10D-1	1
D21	205 5 9050 44310	Diode, DS443	1
D22	4 2029 70540	Diode, RD5.6E	1
D23	202 5 9110 18820	Diode, 1S188	1
L1	4 2539 70030	RF Choke	1
P1	4 2229 72300	Potentiometer (B 350, F.F. & Rew Time Adj.)	1
P2	4 2229 72300	Potentiometer (B 350, Tape Speed Adj.)	1
P3	4 2229 72420	Potentiometer (B 3k, Tape Speed Adj.)	1
Q5	203 5 5100 53660	Transistor, 2SC536	1
Q6	4 2039 70093	Transistor, 2SD227	1
Q7	4 2039 70101	Transistor, 2SC945	1
Q8	203 5 5100 53660	Transistor, 2SC945	1

Ref. No.	Part No.	Description	Q'ty
	CONTROL CIRCUIT P.C.B. ASSY		
9	203 5 5100 53660	Transistor, 2SC536	1
10	4 2039 70101	Transistor, 2SC945	1
11	203 5 0200 18720	Transistor, 2SB187	1
12	203 5 8210 32540	Transistor, 2SD325	1
13	203 5 5100 53660	Transistor, 2SC536	1
14	203 5 5100 53660	Transistor, 2SC536	1
15	203 5 8210 32540	Transistor, 2SD325	1
10	RD1 2 2251 KV000	Carbon 1.2k ohm 1/4W ±10%	1
11	RD2 7 1251 KT000	Carbon 270 ohm 1/4W ±10%	1
12	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
13	RD8 2 3251 KV000	Carbon 82k ohm 1/4W ±10%	1
14	RD5 6 0251 KV000	Carbon 56 ohm 1/4W ±10%	1
15	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
16	RD5 6 0251 KV000	Carbon 56 ohm 1/4W ±10%	1
17	RD1 1 2251 JV000	Carbon 1.1k ohm 1/4W ±5%	1
18	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
19	RD2 2 3251 KV000	Carbon 22k ohm 1/4W ±10%	1
21	RD2 2 3251 KV000	Carbon 22k ohm 1/4W ±10%	1
22	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
23	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
24	RD1 0 2251 KV000	Carbon 1k ohm 1/4W ±10%	1
25	RD1 5 3251 KV000	Carbon 15k ohm 1/4W ±10%	1
26	RD1 2 3251 KV000	Carbon 12k ohm 1/4W ±10%	1
27	RD1 5 3251 KV000	Carbon 15k ohm 1/4W ±10%	1
28	RD4 7 3251 KT000	Carbon 47k ohm 1/4W ±10%	1
29	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
30	RD8 2 3251 KV000	Carbon 82k ohm 1/4W ±10%	1
31	RD3 9 3251 KV000	Carbon 39k ohm 1/4W ±10%	1
32	RD1 2 4251 KV000	Carbon 120k ohm 1/4W ±10%	1
33	RD2 2 2251 KV000	Carbon 2.2k ohm 1/4W ±10%	1
34	RD5 6 0251 KV000	Carbon 56 ohm 1/4W ±10%	1
35	RD6 8 3251 KV000	Carbon 68k ohm 1/4W ±10%	1
36	RD2 2 3251 KV000	Carbon 22k ohm 1/4W ±10%	1
37	RD1 0 3251 KT000	Carbon 10k ohm 1/4W ±10%	1
38	RD3 3 3251 KV000	Carbon 33k ohm 1/4W ±10%	1
39	RD5 6 1251 KT000	Carbon 560 ohm 1/4W ±10%	1
40	RD2 2 1251 KV000	Carbon 220 ohm 1/4W ±10%	1
41	RD8 2 1251 KT000	Carbon 820 ohm 1/4W ±10%	1
42	RD1 8 1251 KV000	Carbon 180 ohm 1/4W ±10%	1
43	RD4 7 A251 KV000	Carbon 4.7 ohm 1/4W ±10%	1
44	RD5 6 1251 KV000	Carbon 560 ohm 1/4W ±10%	1
45	RD3 3 2251 KV000	Carbon 3.3k ohm 1/4W ±10%	1
46	RD1 0 3251 JV000	Carbon 10k ohm 1/4W ±5%	1
47	RD4 7 2251 KV000	Carbon 4.7k ohm 1/4W ±10%	1
48	RD1 8 2251 KV000	Carbon 1.8k ohm 1/4W ±10%	1
49	RD3 9 2251 KV000	Carbon 3.9k ohm 1/4W ±10%	1
50	RD4 7 3251 KV000	Carbon 47k ohm 1/4W ±10%	1
51	RD4 7 3251 KT000	Carbon 47k ohm 1/4W ±10%	1
52	RD2 4 2251 JT000	Carbon 2.4k ohm 1/4W ±5%	1
53	RD1 5 2251 KT000	Carbon 1.5k ohm 1/4W ±10%	1
56	RD1 0 1251 KT000	Carbon 100 ohm 1/4W ±10%	1
TH1	204 5 9000 00350	Thermister, SDT35	1
TH2	204 5 9000 02500	Thermister, SDT250	1
	141 2 3689 04600	Radiator Transistor	1
	201 2 5010 010021	I Sheet-313-B	2
	141 2 4539 07100	Washer	2
	101 3 1303 00811	Screw, Pan Hd. +M3.0x8	2
	106 3 1103 00111	Nut-1 M3.0	2
	4 2369 70740	RT Pin	4
CN2	4 2359 72961	Connector 6P Assy	1
CN4	4 2369 71850	Connector 4P	1
CN5	4 2369 71480	Connector 3P	1
CN6	4 2369 71850	Connector 4P	1
CN7	4 2369 71860	Connector 5P	1
	141 2 4729 04400	Staple 12.5	4
	4 2369 70740	RT Pin	4
	POWER SUPPLY P.C.B. ASSY		
	4 1329 73043	Power Supply P.C.B. Assy	1
C2	CD1 0 8250 0000V	Electrolytic 1000MF 25V	1
C3	CD1 0 7250 0000V	Electrolytic 100MF 25V	1
C4	CD1 0 8160 0000V	Electrolytic 1000MF 16V	1
C5	CD1 0 8350 0000V	Electrolytic 1000MF 35V	1

Ref. No.	Part No.	Description	Q'ty
	POWER SUPPLY P.C.B. ASSY		
C6	CD1 0 8350 0000V	Electrolytic 1000MF 35V	1
C7	CD2 2 7350 0000V	Electrolytic 220MF 35V	1
C8	CD2 2 7350 0000V	Electrolytic 220MF 35V	1
C9	CD1 0 8250 0000V	Electrolytic 1000MF 25V	1
C10	CD1 0 5160 0000V	Electrolytic 1MF 16V	1
C11	CC2 2 2500 KE00C	Ceramic 0.0022MF 50V ±10%	1
D1	202 5 2300 017101	Diode, DS17	1
D2	202 5 2300 018101	Diode, DS18	1
D3	202 5 2300 018101	Diode, DS18	1
D4	202 5 2300 017101	Diode, DS17	1
D5	4 2029 70330	Diode, WZ140	1
D6	4 2029 70360	Diode, WZ-210	1
Q1	203 5 8210 32550	Transistor, 2SD325	1
Q2	203 5 8210 32550	Transistor, 2SD325	1
Q3	4 2039 70124	Transistor, 2SC1096	1
Q4	203 5 7200 60850	Transistor, 2SA608	1
R2	RH2 2 1202 KH000	Metal 220 ohm 2W ±10%	1
R3	RD5 6 A251 KT000	Carbon 5.6 ohm 1/4W ±10%	1
R5	RD3 3 1202 KH000	Metal 330 ohm 2W ±10%	1
R6	RD3 3 1251 KT000	Carbon 330 ohm 1/4W ±10%	1
R7	RD5 6 A251 KT000	Carbon 5.6 ohm 1/4W ±10%	1
R8	RD1 0 3251 KT000	Carbon 10k ohm 1/4W ±10%	1
R9	RD2 2 2251 KT000	Carbon 2.2k ohm 1/4W ±10%	1
R20	RD2 2 2251 KT000	Carbon 2.2k ohm 1/4W ±10%	1
	4 2359 70910	Fuse Holder	4
F1	4 2349 70210	Fuse (T800MA)	1
F2	4 2349 70040	Fuse (T500MA)	1
CN1	4 2369 71850	Connector 4P	1
CN2	4 2369 71450	Connector 6P	1
CN3	4 2369 71480	Connector 3P	1
	141 2 3689 04500	Radiator Transistor	1
	201 2 5010 010021	I Sheet-313-B	2
	201 2 5020 012011	Bush L	2
	101 3 1302 60411	Screw, Pan Hd. +M2.6x4	2
	106 3 1102 60123	Nut-1 M2.6	2
	141 2 4729 00200	Lug	1
	141 2 4729 04400	Staple 12.5	1
	JACK P.C.B. ASSY		
	4 1329 73102	Jack P.C.B. Assy	1
CN30	4 2369 71480	Connector 3P	1
CN31	4 2369 71480	Connector 3P	1
CN32	4 2369 71480	Connector 3P	1
CN33	4 2369 71480	Connector 3P	1
C112	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
C212	CD1 0 6160 0000V	Electrolytic 10MF 16V	1
R135	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R136	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R235	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
R236	RD1 0 3251 KV000	Carbon 10k ohm 1/4W ±10%	1
S10	4 2319 72520	Push Push Switch (Input Selector)	1
T101	4 2549 70150	Matching Transformer	1
T201	4 2549 70150	Matching Transformer	1
UN5	4 1329 73070	Pre-Amplifier Unit P.C.B. Assy ④	1
J3	4 2359 71240	Jack 1P (Microphone)	1
J4	4 2359 71240	Jack 1P (Microphone)	1
J5	4 2359 71241	Jack (Headphone)	1
	VOL CONTROL P.C.B. ASSY		
	4 1329 73111	Volume Control P.C.B. Assy	1
R156	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1
R256	RD5 6 2251 KV000	Carbon 5.6k ohm 1/4W ±10%	1
R310	RH2 2 1102 KH000	Metal 220 ohm 1W ±10%	1
R311	RH2 2 1102 KH000	Metal 220 ohm 1W ±10%	1
VR1	4 2229 71340	Volume Control (Output, A-20k)	1
VR2	4 2229 71340	Volume Control (Output, A-20k)	1
VR3	4 2229 71340	Volume Control (Input, A-20k)	1
VR4	4 2229 71340	Volume Control (Input, A-20k)	1
	141 2 4729 04700	Staple 10	3
	SWITCH P.C.B. ASSY		
	4 1329 73160	Switch P.C.B. Assy (Memory & Limiter)	1
CN28	4 2359 73375	Connector 4P Assy	1

Ref. No.	Part No.	Description	Q'ty
	SWITCH P.C.B. ASSY		
R57	RH5 6 0102 KH000	Metal 56 ohm 1W ±10%	1
R304	RH5 6 0102 KH000	Metal 56 ohm 1W ±10%	1
S8	4 2319 72460	Switch Lever (Memory)	1
S9	4 2319 72460	Switch Lever (Limiter)	1
	4 2369 70740	RT Pin	6
	4 2359 70990	Socket, RT Pin	2
	LAMP P.C.B. ASSY		
	4 1329 73170	Lamp P.C.B. Assy (Cassette)	1
PL9	4 6129 70320	Lamp (Cassette)	1
	4 2359 70990	Socket, RT Pin	1
	LAMP P.C.B. ASSY		
	4 1329 73240	Lamp P.C.B. Assy	1
	4 2269 78860	Lamp P.C.B.	1
CN29	4 2369 71740	Connector 4P	1
	MISCELLANEOUS		
CN1	4 2359 73372	Connector 4P Assy	1
CN5	4 2359 73341	Connector 3P Assy	1
CN8	4 2359 73371	Connector 4P Assy	1
CN12	4 2359 72905	Connector 3P Assy	1
CN13	4 2359 73690	Connector Assy (CN18)	1
CN14	4 2359 73344	Connector 3P Assy	1
CN15	4 2359 72902	Connector 3P Assy	1
CN16	4 2359 73691	Connector Assy (CN33)	1
CN17	4 2359 72903	Connector 3P Assy	1
CN19	4 2359 73346	Connector 3P Assy	1
CN20	4 2359 73510	Connector Assy (CN21, CN41)	1
CN22	4 2359 72901	Connector 3P Assy	1
CN23	4 2359 73500	Connector Assy (CN30)	1
CN24	4 2359 73348	Connector 3P Assy	1
CN31	4 2359 73692	Connector Assy (CN40)	1
CN32	4 2359 72904	Connector 3P Assy	1
CN34	4 2359 73700	Connector 3P Assy (CN35)	1
CN36	4 2359 72906	Connector 3P Assy	1
	4 2359 70990	Socket RT Pin	2
	MECHANISM		
	141 0 3119 12400	Chassis Assy	1
	4 2269 78800	P.C.B. Head	1
S14	4 2319 71090	Switch (Reel Motor)	1
HD1	4 2429 70990	Playback Head	1
HD2	4 2429 70980	Record Head	1
SL1	4 2649 70151	Plunger (Solenoid)	1
M1	4 5279 70741	Motor (Reel Motor)	1
M2	4 5279 70840	Motor	1
	111 2 7210 10400	Wire, Band HP	2
	141 2 4729 05300	Wire, Band	2
	141 0 5729 02300	Holder Assy	2
	141 2 4179 02800	Nut	2
	141 0 5519 04500	Take-up Idler Assy	1
	112 3 1302 00040	E Ring M2.0	1
	141 2 8519 10600	Spring, Slide Base Stopper	1
	141 2 4539 01900	Washer	1
	141 0 5519 03700	Assy, Take-up Reel	1
	101 3 1302 60311	Screw, Pan Hd. +M2.6x3	3
	141 0 5519 03800	Assy, Supply Reel	1
	101 3 1302 60311	Screw, Pan Hd. +M2.6x3	3
	141 2 7419 42300	Magnet Holder	1
	141 2 5519 21300	Magnet Rotor	1
	141 2 3519 28200	Cassette Adjust	1
	101 3 1303 00411	Screw, Pan Hd. +M3.0x4	1
	141 2 8219 19600	Guide Ball	3
	141 2 8259 00100	Ball	4
	141 2 7319 27100	Push Plate	1
	141 0 7319 14200	Slide Base Assy	1
	141 0 5459 00700	Pinch Roller Arm Assy	1
HD3	141 0 5459 00800	Pinch Roller Arm Assy (Erase Hd.)	1
	141 2 4539 08100	Washer	4
	141 2 4179 03000	Nylon Nut	2
	141 2 3519 28400	Plate , Record Head	1
	115 3 1402 00411	Screw, Slotted Set +M2.0x4	2

Ref. No.	Part No.	Description	Q'ty
	MECHANISM		
	101 3 2502 00811	Screw, Cylinder Hd. -M2.0x8	1
	101 3 1302 00311	Screw, Pan Hd. +M2.0x3	1
	141 2 8519 63100	Spring, R H Azimuth	1
	112 3 1302 50040	E Ring M2.5	1
	141 2 3519 28300	Plate, Play Head	1
	115 3 1402 00411	Screw, Slotted Set +M2.0x4	2
	101 3 2502 00811	Screw, Cylinder Hd. +M2.0x8	1
	101 3 1302 00311	Screw, Pan Hd. +M2.0x3	1
	141 2 8519 12400	Spring, Shut-off	2
	112 3 1302 50040	E Ring M2.5	1
	141 2 8519 63200	Spring, Adjust Roller	2
	141 2 8519 63000	Spring, Pinch Roller	2
	141 2 3519 26300	Spring, Adjustor	1
	141 2 3519 26301	Spring, Adjustor	1
	101 3 1303 00311	Screw, Pan Hd. +M3.0x3	2
	141 2 4729 03400	Lug	2
	141 2 3519 29800	Actuator	1
	101 3 1303 00411	Screw, Pan Hd. +M3.0x4	2
	141 2 8259 00100	Ball	3
	141 2 8219 15700	Guide Ball	2
	101 3 1302 60311	Screw, Pan Hd. +M2.6x3	2
	141 2 8219 20900	Guide Ball	1
	101 3 1303 00311	Screw, Pan Hd. +M3.0x3	1
	141 2 7149 02000	Brake	1
	112 3 1302 50040	E Ring M2.5	1
	112 3 1303 00040	E Ring M3.0	2
	141 2 8519 62900	Spring, Brake	1
	141 2 7419 39800	Lever	1
	141 2 7529 50301	Spacer	2
	101 3 1303 01011	Screw, Pan Hd. +M3.0x10	2
	141 2 8519 60000	Spring, Plate	1
	141 2 8419 07800	Lever, Interlock	1
	141 2 8519 59200	Spring	1
	141 0 3519 10100	Bracket Assy	1
	112 3 1302 00040	E Ring M2.0	1
	101 3 1302 60411	Screw, Pan Hd. +M2.6x4	2
	141 2 8219 08900	Chip	1
	141 2 3519 29200	Bracket Switch	1
	101 3 1302 00811	Screw, Pan Hd. +M2.0x8	2
	101 3 1303 00411	Screw, Pan Hd. +M3.0x4	1
	141 2 4359 13200	Switch Sheet	1
	141 2 3519 29300	Bracket, Lamp	1
	101 3 2502 60311	Screw, Cylinder Hd. -M2.6x3	1
	141 2 3519 29400	Adjustor	1
	101 3 1303 00411	Screw, Pan Hd. +M3.0x4	4
	141 2 3519 25300	Bracket, Motor	1
	141 2 3519 26500	Hook	1
	141 2 4459 08201	Cushion, Motor	3
	141 2 3789 01400	Spacer, Motor	3
	141 2 4579 00100	Washer	2
	101 3 1302 00311	Screw, Pan Hd. +M2.0x3	2
	101 3 1302 61011	Screw, Pan Hd. +M2.6x10	3
	141 0 5519 04800	Friction Bracket Assy	1
	101 3 1303 00411	Screw, Pan Hd. +M3.0x4	1
	141 2 5649 09100	Belt	1
	141 0 6139 00700	Sensor Assy	1
	141 2 6139 11900	Lock Plate	1
	141 2 6139 12000	Lock Plate, Record	1
	112 3 1303 00040	E Ring M3.0	2
	141 2 8519 59600	Spring, Plate Lock	1
	141 2 8519 01800	Spring, Rewind Roller	1
	141 0 3519 08900	Latch Bracket Assy	1
	101 3 1303 00411	Screw, Pan Hd. +M3.0x4	3
	141 0 7319 15100	Selector Base Assy	1
	141 2 7529 50300	Spacer	1
	112 3 1303 00040	E Ring M3.0	1
	101 3 1303 00611	Screw, Pan Hd. +M3.0x6	1
	141 2 8519 59900	Spring Selector	1
	141 0 7419 15100	Idler Arm Assy	1
	141 0 5519 04600	Idler Assy	1
	141 2 4539 09300	Washer	1
	141 2 4539 13900	Washer	2
	141 2 8519 63300	Spring, Rewind Roller	1

PARTS LIST

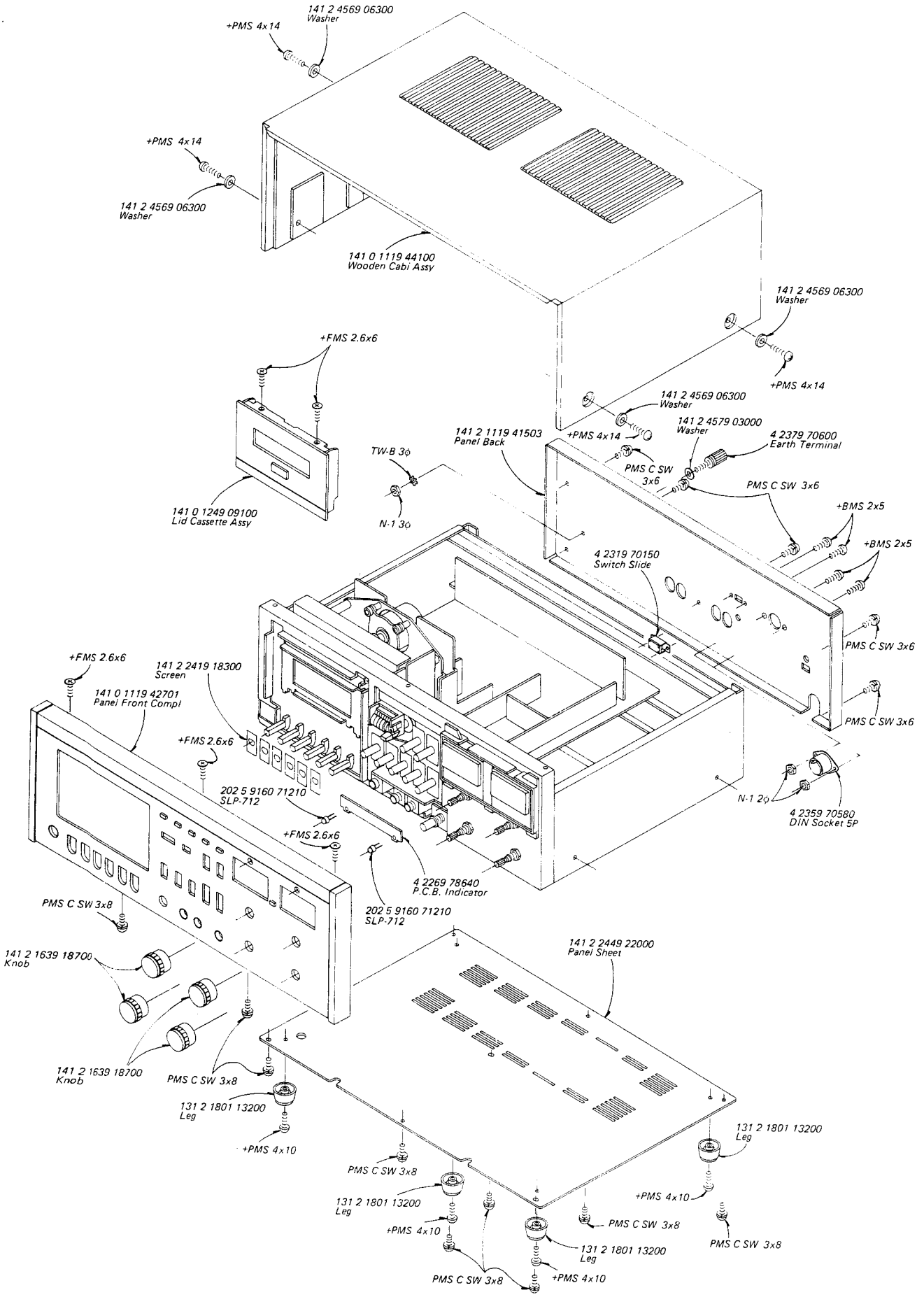
Ref. No.	Part No.	Description		Q'ty
	MECHANISM			
	141 2 4539 01400	Washer		1
	112 3 1302 50040	E Ring	M2.5	1
	141 2 8519 59500	Spring, Wind Idler		1
	141 2 7319 26400	Plate, Wind		1
	141 2 8519 59700	Spring, Wind Plate		1
	112 3 1303 00040	E Ring	M3.0	2
	141 2 7319 26300	Play Plate		1
	141 2 8519 59800	Spring, Play Plate		1
	112 3 1303 00040	E Ring	M3.0	2
	112 3 1302 50040	E Ring	M2.5	1
	141 0 7419 15200	Pause Lever Assy		1
	112 3 1301 50040	E Ring	M1.5	1
	141 0 7419 15300	Pause Lever Assy		1
	112 3 1301 50040	E Ring	M1.5	1
	112 3 1303 00040	E Ring	M3.0	2
	141 2 7319 26500	Plate, Stop Eject		1
	141 2 8519 60000	Spring, Plate		1
	141 0 7319 14300	Pause Plate Assy		1
	112 3 1303 00040	E Ring	M3.0	2
	141 2 8519 64100	Spring, Pause Lever		1
	141 2 5369 02700	Switch Bracket		1
	101 3 1302 01011	Screw, Pan Hd.	+M2.0x10	2
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	1
	141 2 7529 50300	Spacer		1
	101 3 1302 00411	Screw, Pan Hd.	+M2.0x4	1
	141 0 3519 09000	Rewind Switch Bracket Assy		1
	112 3 1302 50040	E Ring	M2.5	1
	101 3 1302 01611	Screw, Pan Hd.	+M2.0x16	2
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	2
	141 2 8519 04800	Spring, Rewind Lever		1
	141 2 3519 28600	Rewind Switch Bracket		1
	141 0 3519 09100	Contact Lever Assy		1
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	2
	141 0 5219 03200	Flywheel Assy		1
	141 2 4539 01500	Washer		4
	141 2 4539 13400	Washer, Oil Cut		1
	141 0 5219 03201	Flywheel Assy		1
	141 2 4539 01500	Washer		1
	141 2 4539 13400	Washer, Oil Cut		1
	141 0 3169 02900	Bracket Assy		1
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	1
	141 2 4469 02500	Pad, Capstan		2
	141 0 3789 00800	Motor Bracket Assy		1
	141 2 4469 19900	Adjust Screw		2
	141 0 8429 01000	Connecting Rod Assy		1
	112 3 1303 00040	E Ring	M3.0	2
	141 2 3519 25600	Motor Bracket Main		1
	141 2 4459 08201	Motor Cushion		4
	141 2 3789 01400	Motor Spacer		4
	141 2 4579 00100	Washer		4
	101 3 1302 61011	Screw, Pan Hd.	+M2.6x10	4
	101 3 1302 60611	Screw, Pan Hd.	+M2.6x6	2
	101 3 1802 60811	Screw, Truss Hd.	+M2.6x8	2
	101 3 1303 00611	Screw, Pan Hd.	+M3.0x6	2
	141 2 3799 02700	Motor Pulley		1
	101 3 1302 60411	Screw, Pan Hd.	+M2.6x4	3
	141 2 5649 09200	Belt		1
	141 2 3519 26400	Bracket, Muting Switch		1
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	4
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	2
	141 2 4539 01900	Washer		1
	141 0 3519 09700	Pulley Bracket Assy		1
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	2
	141 2 5519 21500	Pulley, Counter		1
	141 2 4539 01400	Washer		2
	141 2 5649 08900	Belt		1
	141 2 5649 09000	Belt		1
	112 3 1301 50040	E Ring	M1.5	1
	141 2 7419 39400	Shut-off Lever		1
	101 3 1303 01011	Screw, Pan Hd.	+M3.0x10	1
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	2
	141 2 3519 27400	Bracket, Hall IC P.C.B.		1
	106 3 1103 00111	Nut-1	M3.0	1
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	1
	110 3 1104 00011	Small Round Washer	M4.0	1
	110 3 9451 00053	Washer	M4.5x10.0x0.5	2
	141 0 3519 09201	Ejector Bracket Assy		1
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	2
	141 2 3519 27300	Plate Fix Chassis		1
	141 0 3519 09200	Ejector Bracket Assy		1
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	2
	141 2 3519 27301	Plate Fix Chassis		1
	141 0 3519 09300	Bracket Lever Link Assy		1
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	2
	141 0 3519 09301	Bracket Lever Link Assy		1
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	2
	141 0 3519 10000	Ejector Assy		1
	141 2 7529 50700	Pin Guide Lever Rink		2
	141 2 7529 50600	Pin, Holder Cassette		2
	141 2 4469 20000	Push, Cassette		1
	112 3 2302 00086	Push, Nut-E	M2.0	1
	141 2 8539 23800	Spring, Cassette		4
	141 2 8219 21000	Cassette Guide		1
	141 2 8219 21100	Cassette Guide		1
	101 3 1302 60411	Screw, Pan Hd.	+M2.6x4	4
	141 2 7529 58200	Spacer		2
	101 3 1702 00311	Screw, Bind Hd.	+M2.0x3	2
	141 0 3519 10300	Bracket Assy		1
	141 2 3519 26600	Cassette Adjust		1
	101 3 1302 60311	Screw, Pan Hd.	+M2.6x3	1
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	1
	141 0 3519 10200	Lever Kick Out Assy		1
D7	202 5 9410 010101	Diode, 10D-1		1
S13	4 2319 71330	Micro Switch (Pause Switch)		1
	141 2 8519 33100	Spring, Roller Arm Lever		1
S15	4 2319 71330	Micro Switch (Rewind Switch)		1
S16	4 2319 71330	Micro Switch (Rewind Switch)		1
	141 0 6139 00800	Function Button Assy		1
S18	4 2319 72350	Push Push Switch (Power Switch)		1
	4 2439 70352	Power Cord		1
T1	4 2519 72350	Power Transformer		1
ME1	4 5119 70400	Indicator		1
ME2	4 5119 70400	Indicator		1
	111 2 7210 10400	Wire Band HP		3
	141 0 3159 00300	Back Frame Assy		1
	141 0 3169 03100	Bracket Assy		1
	141 0 7319 16300	Slide Switch Assy		1
	141 2 1149 16401	Panel Chassis		1
	141 2 1559 01200	Knob		1
	141 2 3159 00900	Bracket		1
	141 2 3159 01000	Back Frame		1
	141 2 3159 01101	Frame		1
	141 2 3159 01103	Frame		1
	141 2 3519 34000	Power Switch Bracket		1
	141 2 3719 03700	Transformer Bracket		1
	141 2 3739 03400	Meter Holder		1
	141 2 3739 03500	Meter Holder		1
	141 2 3769 05100	Spacer, Jack		1
	141 2 3769 05101	Spacer, Jack		2
	141 2 3899 08200	Bushing		1
	141 2 4359 06501	Insulator		1
	141 2 4359 18900	Switch Cover Upper		1
	141 2 4359 19000	Switch Cover Lower		1
	141 2 4729 05200	Clamp Wire		6
	141 2 4729 05300	Band Wire		3
	141 2 7529 50300	Spacer		1
S17	141 2 8119 03800	Counter (Counter Switch)		1
	141 0 8459 00700	Record Bracket Assy		1
	103 3 1303 00811	Screw, Pan Hd. Tapping-2	+M3.0x8	2
	112 3 1303 00040	E Ring	M3.0	1
	141 2 8519 03100	Spring, Latch Plate		1
	141 0 8459 00800	Lever Assy		1
	112 3 1303 00040	E Ring	M3.0	1
	141 2 8519 16700	Spring, Slide Plate Eject		1
C1	4 2239 70280	Capacitor (0.01 μF)		1
PL1	4 6129 70212	Lamp (Source)		1

PARTS LIST

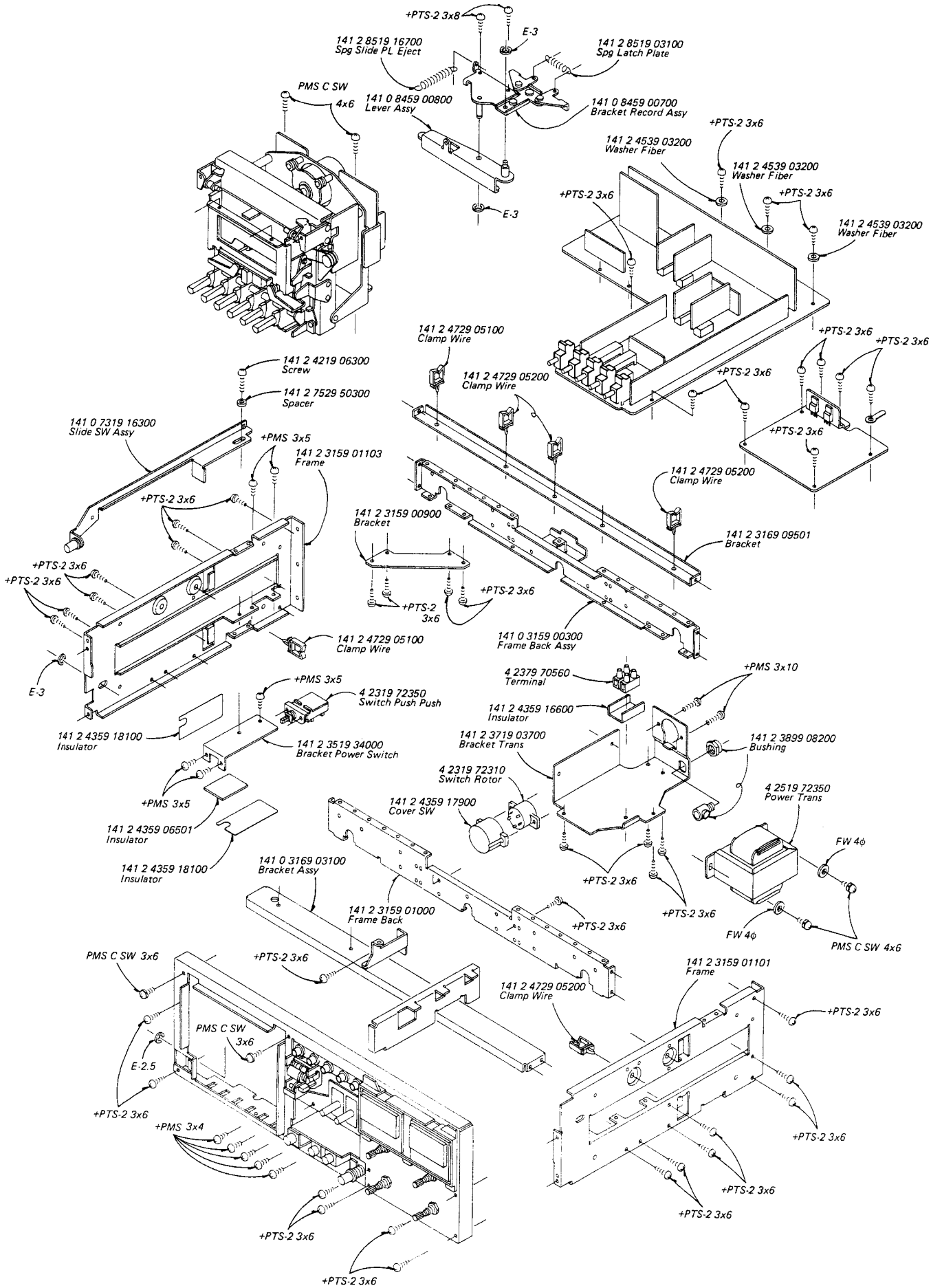
Ref. No.	Part No.	Description		Q'ty
	MECHANISM			
	141 2 3739 00500	Indicator Holder		7
PL2	4 6129 70212	Lamp (Tape)		1
PL3	4 6129 70212	Lamp (DOLBY NR)		1
PL4	4 6129 70212	Lamp (Memory)		1
PL5	4 6129 70212	Lamp (Limiter)		1
PL6	4 6129 70212	Lamp (Record)		1
PL7	4 6129 70212	Lamp (Meter)		1
PL8	4 6129 70212	Lamp (Meter)		1
	143 3 1303 00611	Screw, Pan Hd. Tapping-2	+M3.0x6	27
	103 3 1302 60611	Screw, Pan Hd. Tapping-2	+M2.6x6	3
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	2
	101 3 1303 00411	Screw, Pan Hd.	+M3.0x4	2
	131 3 1304 00611	Screw, Pan Hd. C SW	+M4.0x6	4
	110 3 1204 00011	Finished Washer	M4.0	2
	131 3 1304 00611	Screw, Pan Hd. C SW	+M4.0x6	2
	112 3 1302 50040	E Ring	M2.5	1
	141 2 4219 06300	Screw		1
	112 3 1303 00040	E Ring	M3.0	1
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	2
	143 3 1303 00611	Screw, Pan Hd. Tapping-2	+M3.0x6	4
	141 2 4539 03200	Fiber Washer		3
	143 3 1303 00611	Screw, Pan Hd. Tapping-2	+M3.0x6	5
	143 3 1303 00811	Screw, Pan Hd. Tapping-2	+M3.0x8	2
	141 2 3169 09501	Bracket		1
	143 3 1303 00611	Screw, Pan Hd. Tapping-2	+M3.0x6	4
	141 2 4359 18100	Insulator		2
	101 3 1303 00511	Screw, Pan Hd.	+M3.0x5	1
S20	4 2319 72310	Rotor Switch (Voltage Selector)		1
	101 3 1303 01011	Screw, Pan Hd.	+M3.0x10	2
	141 2 4359 17900	Switch Cover		1
	4 2379 70560	Terminal		1
	101 3 1303 01611	Screw, Pan Hd.	+M3.0x16	1
	141 2 4359 16600	Insulator		1

NOTES: 1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

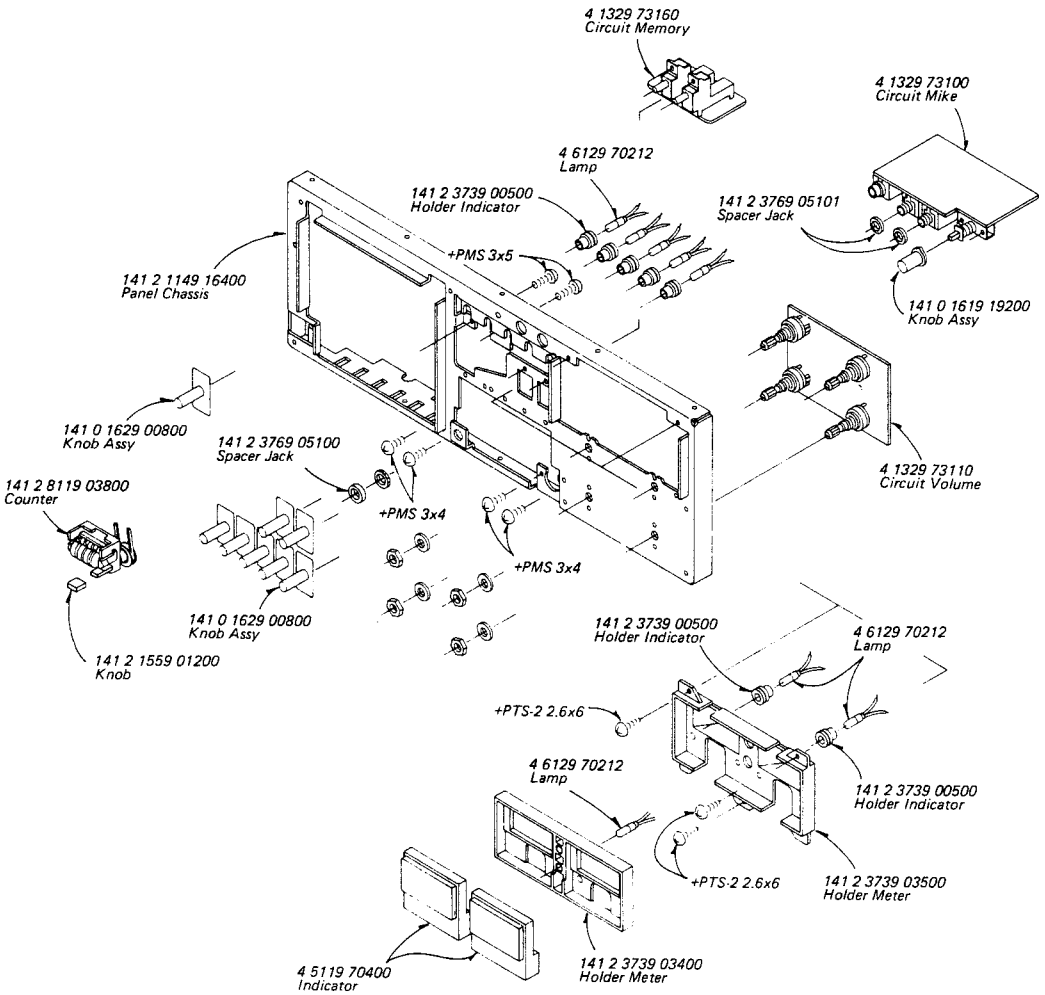
EXPLODED VIEW



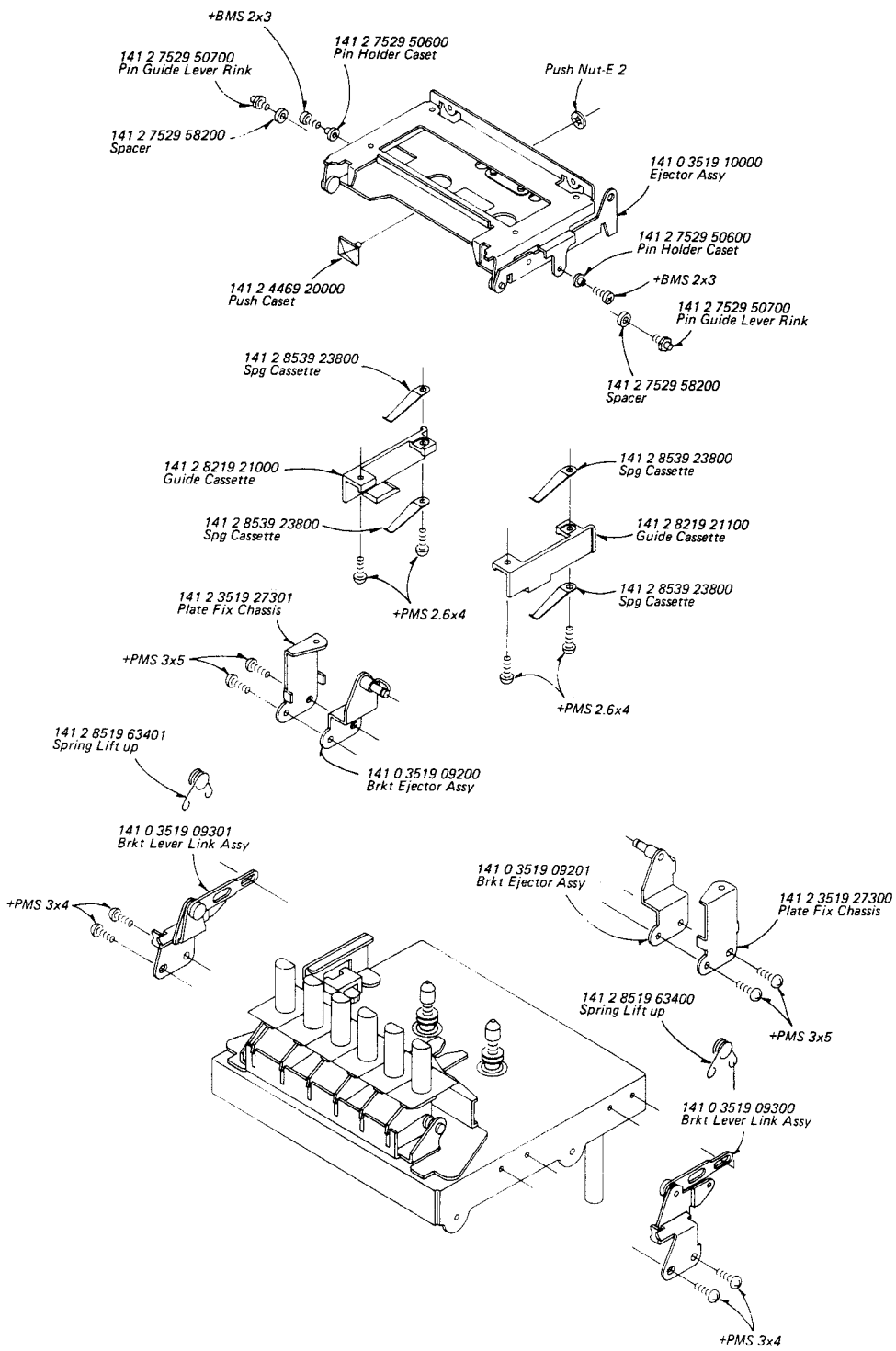
EXPLODED VIEW



EXPLODED VIEW



EXPLODED VIEW



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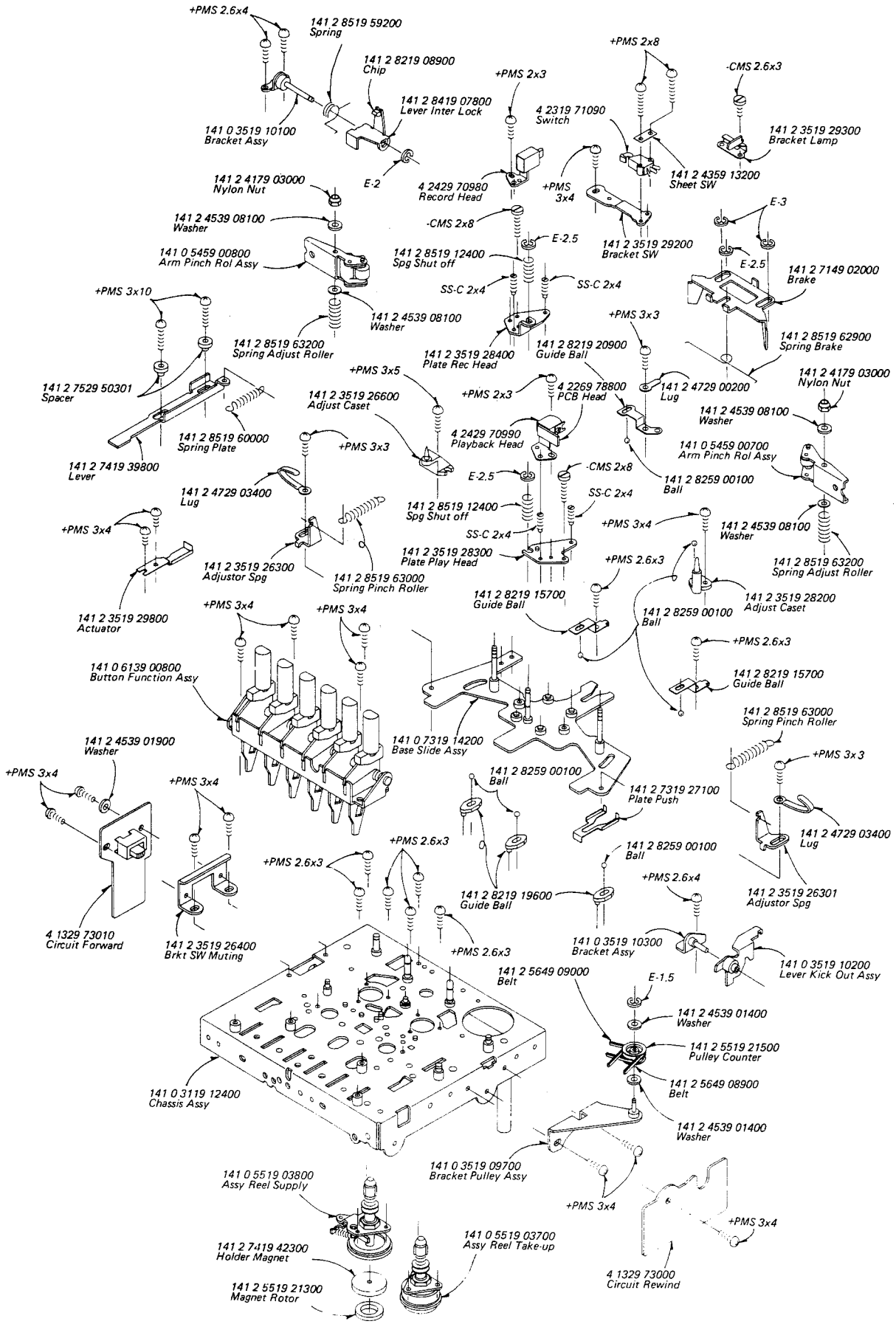
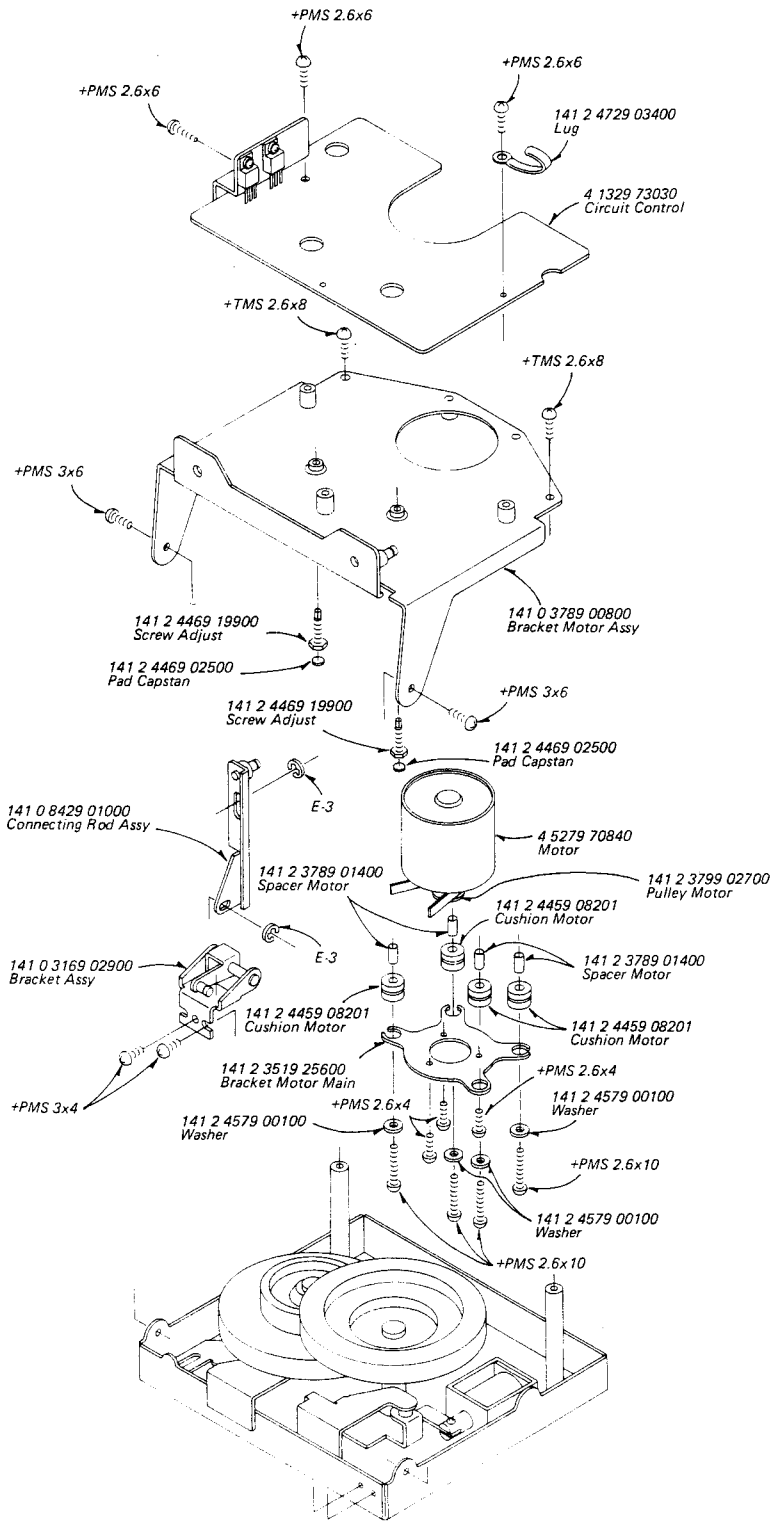
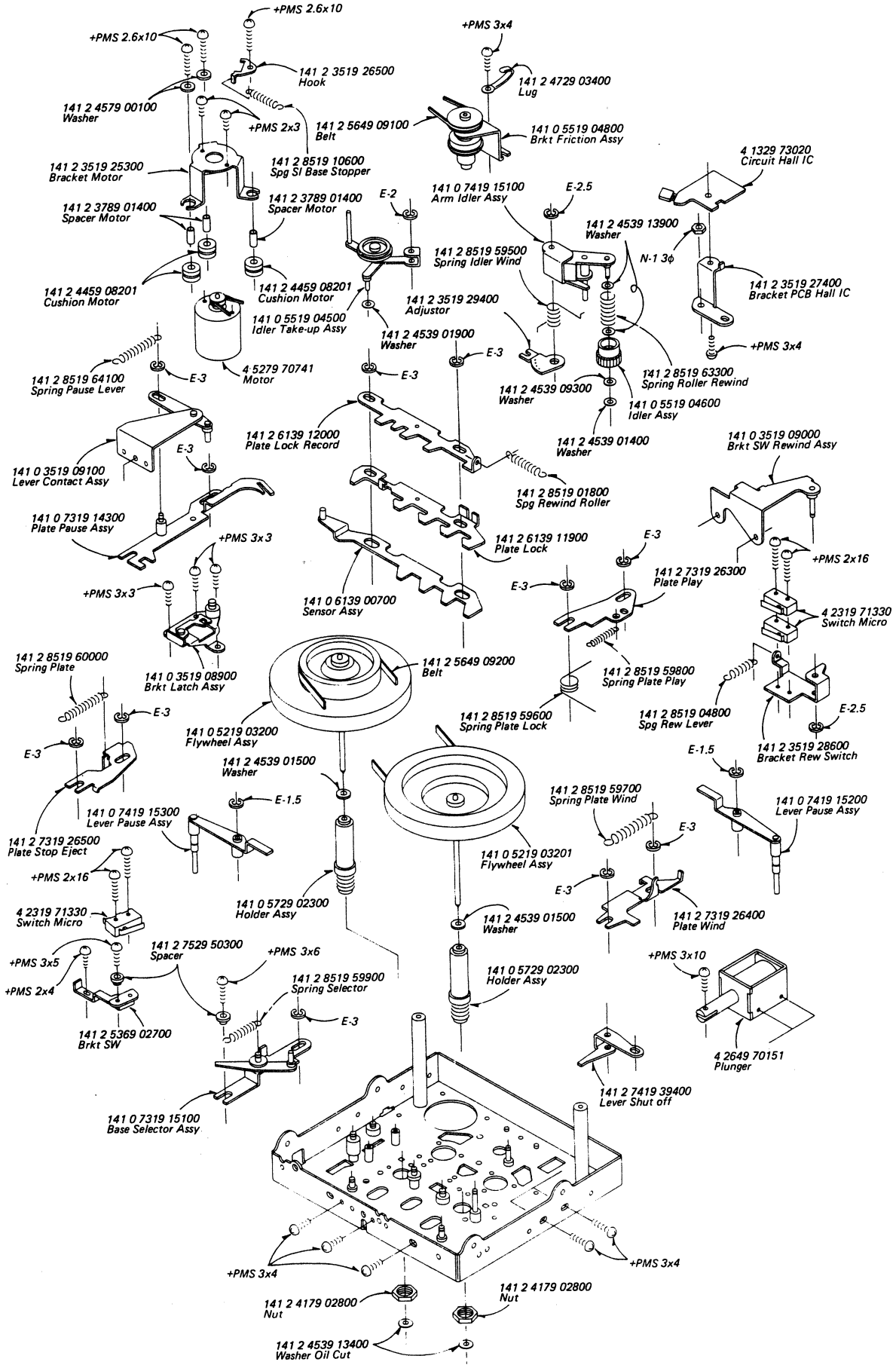


EXPLODED VIEW

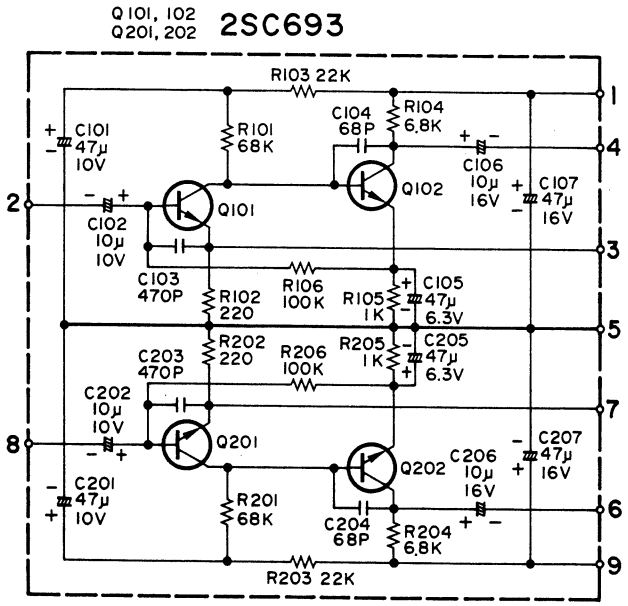


EXPLODED VIEW

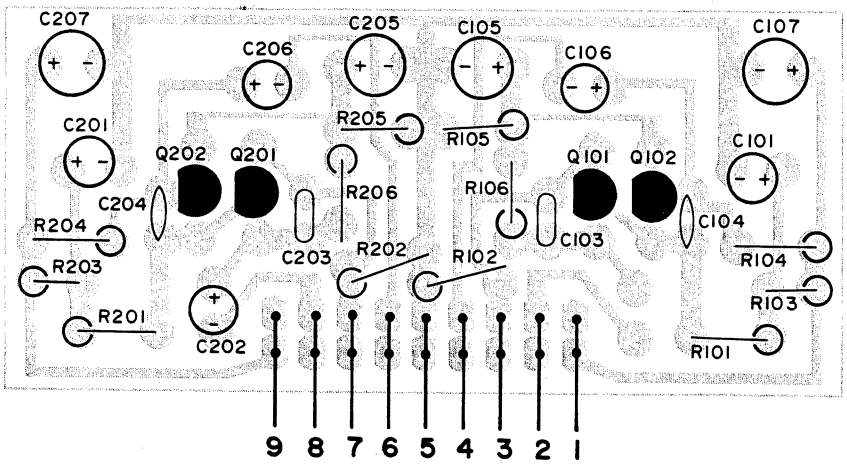


PRE-AMP UNIT P.C.BOARD

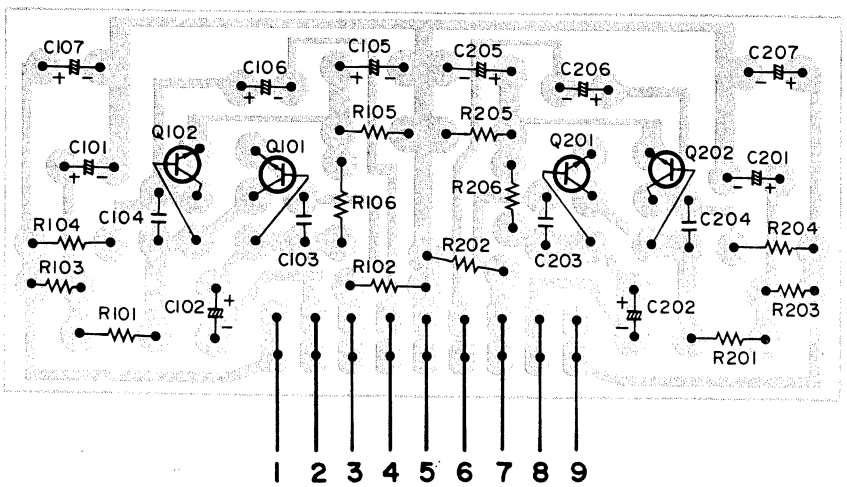
PRE-AMP UNIT SCHEMATIC DIAGRAM



PRE-AMP UNIT P.C.B. (Top View)

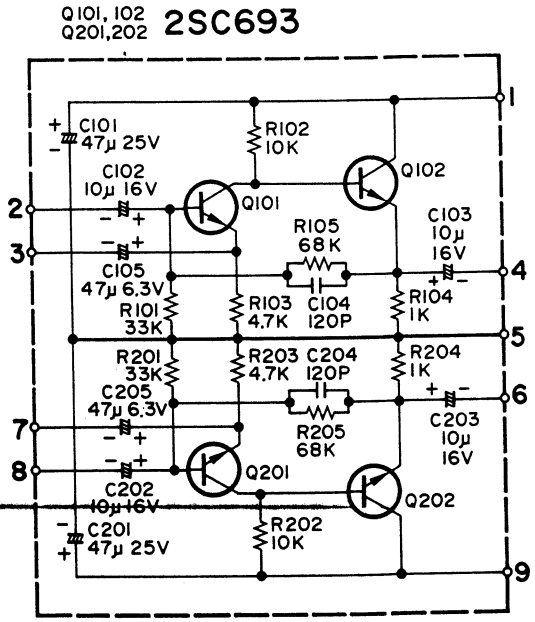


PRE-AMP UNIT P.C.B. (Bottom View)

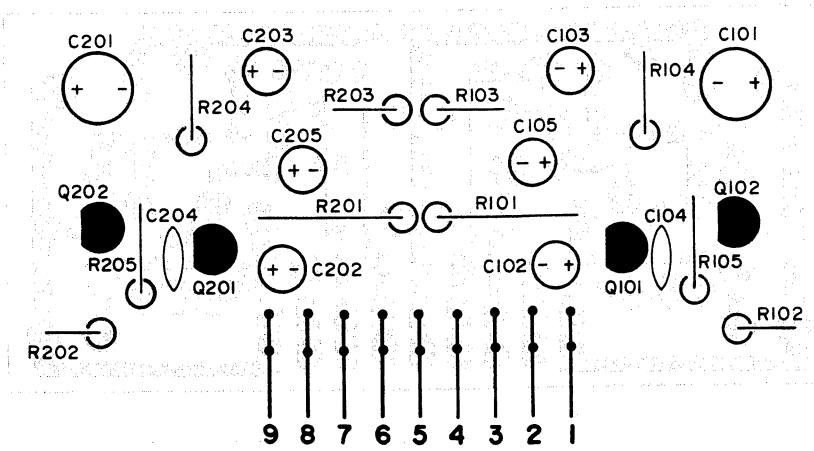


LINE AMP UNIT P.C.BOARD

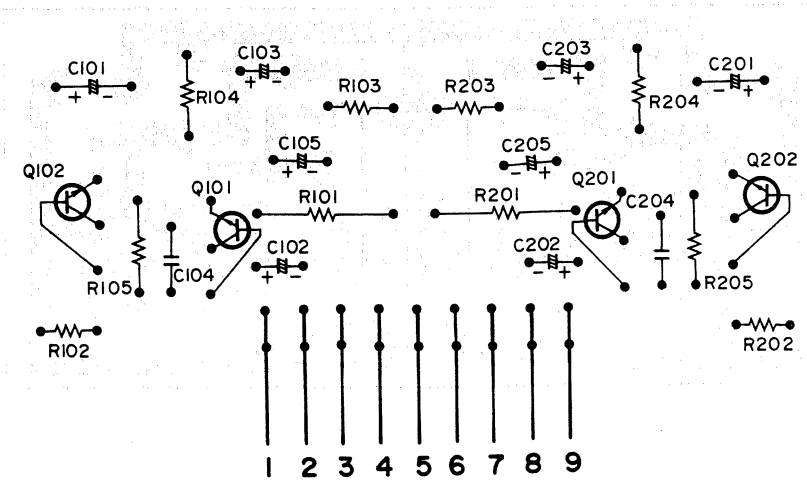
LINE AMP UNIT SCHEMATIC DIAGRAM



LINE AMP UNIT P.C.B. (Top View)

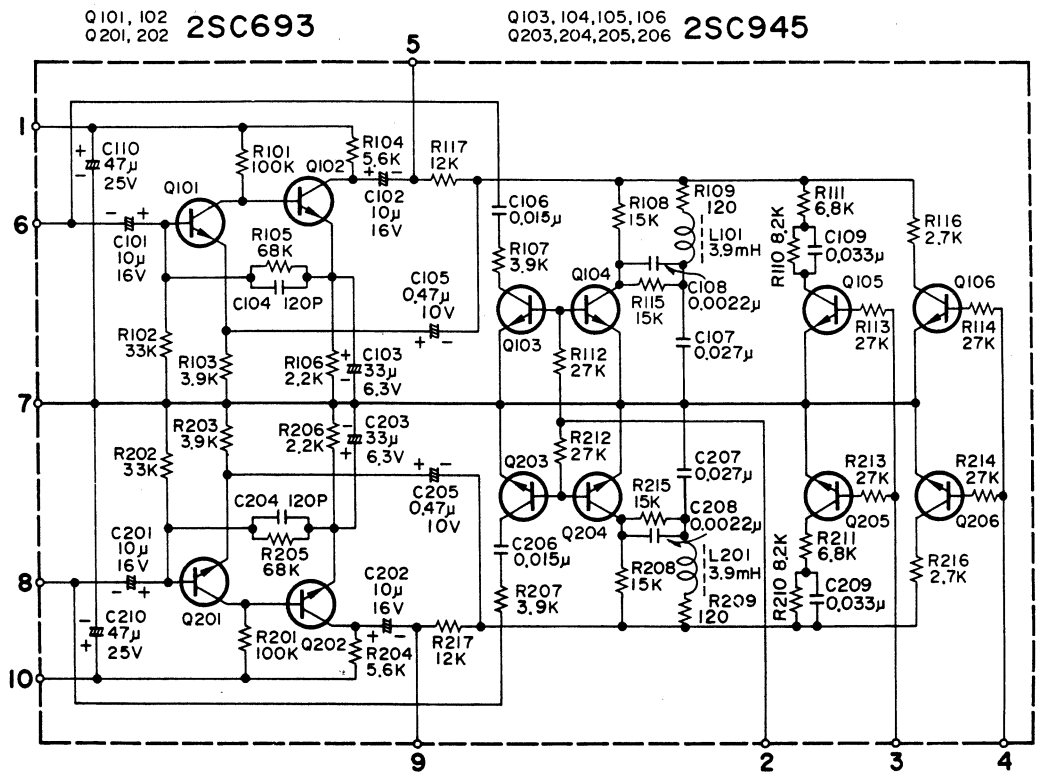


LINE AMP UNIT P.C.B. (Bottom View)

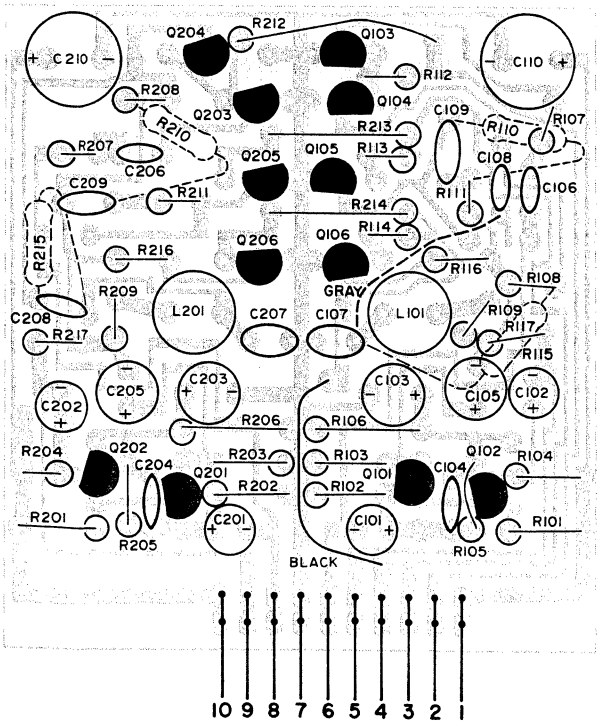


RECORD AMP UNIT P.C.BOARD

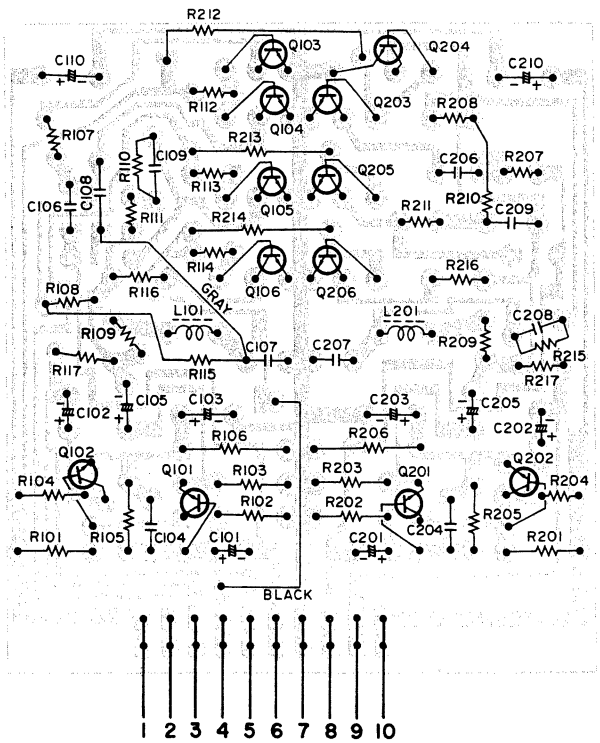
RECORD AMP UNIT SCHEMATIC DIAGRAM



RECORD AMP UNIT P.C.B. (Top View)

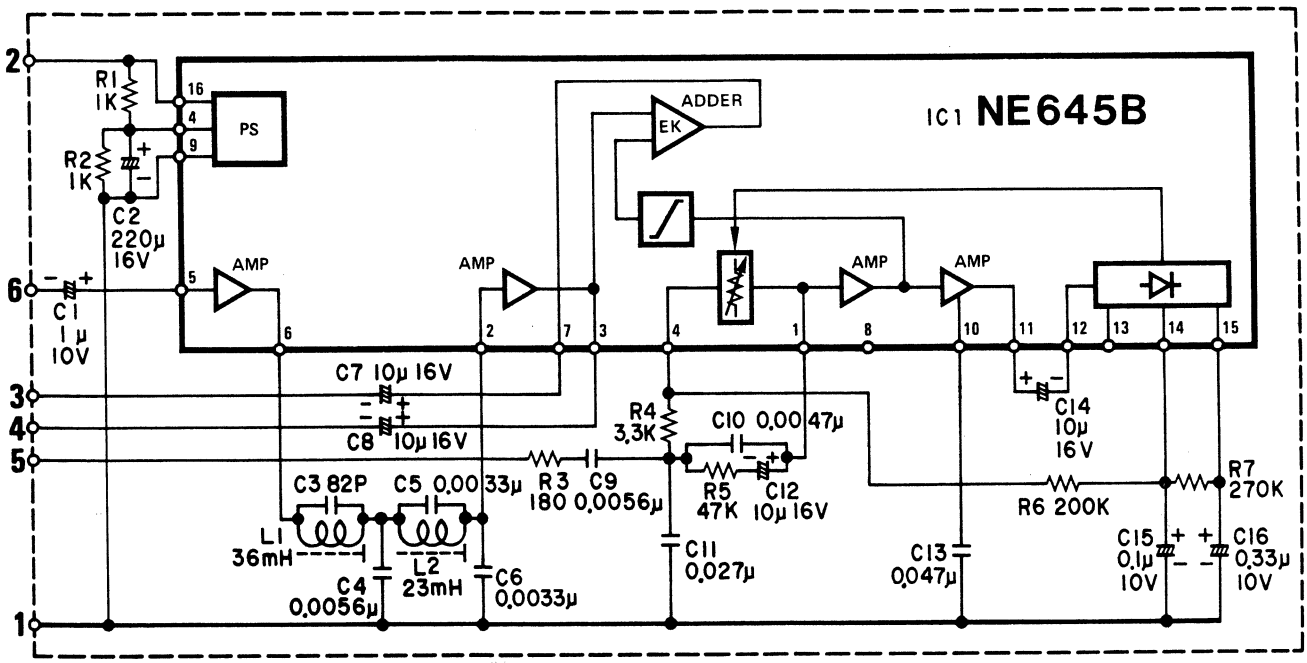


RECORD AMP UNIT P.C.B. (Bottom View)

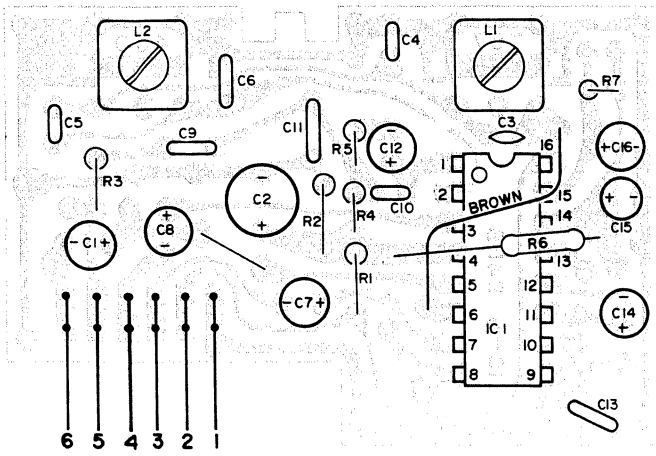


DOLBY NR UNIT P.C.BOARD

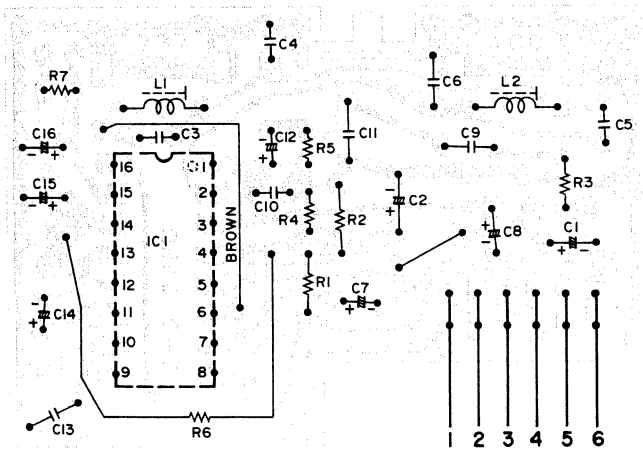
DOLBY NR UNIT SCHEMATIC DIAGRAM (RECORD)



DOLBY NR UNIT P.C.B. TOP VIEW (RECORD)

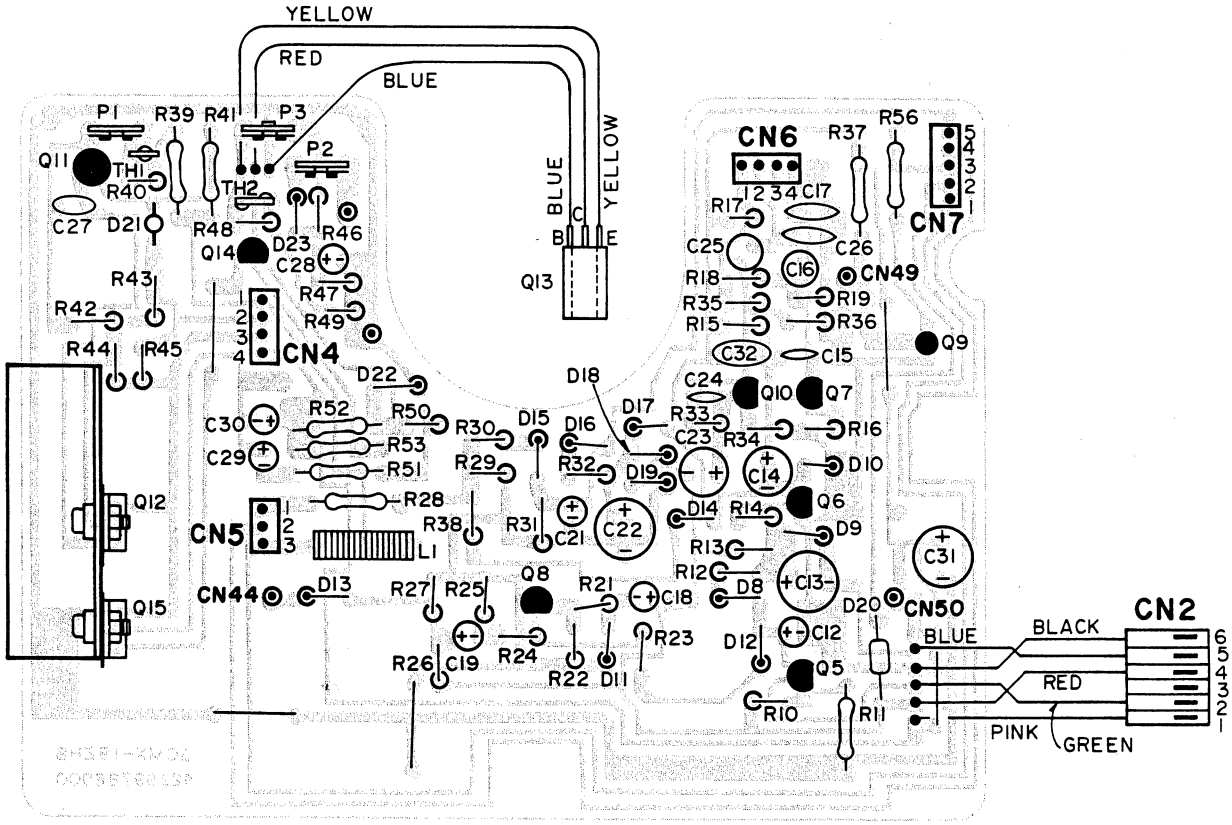


DOLBY NR UNIT P.C.B. BOTTOM VIEW (RECORD)

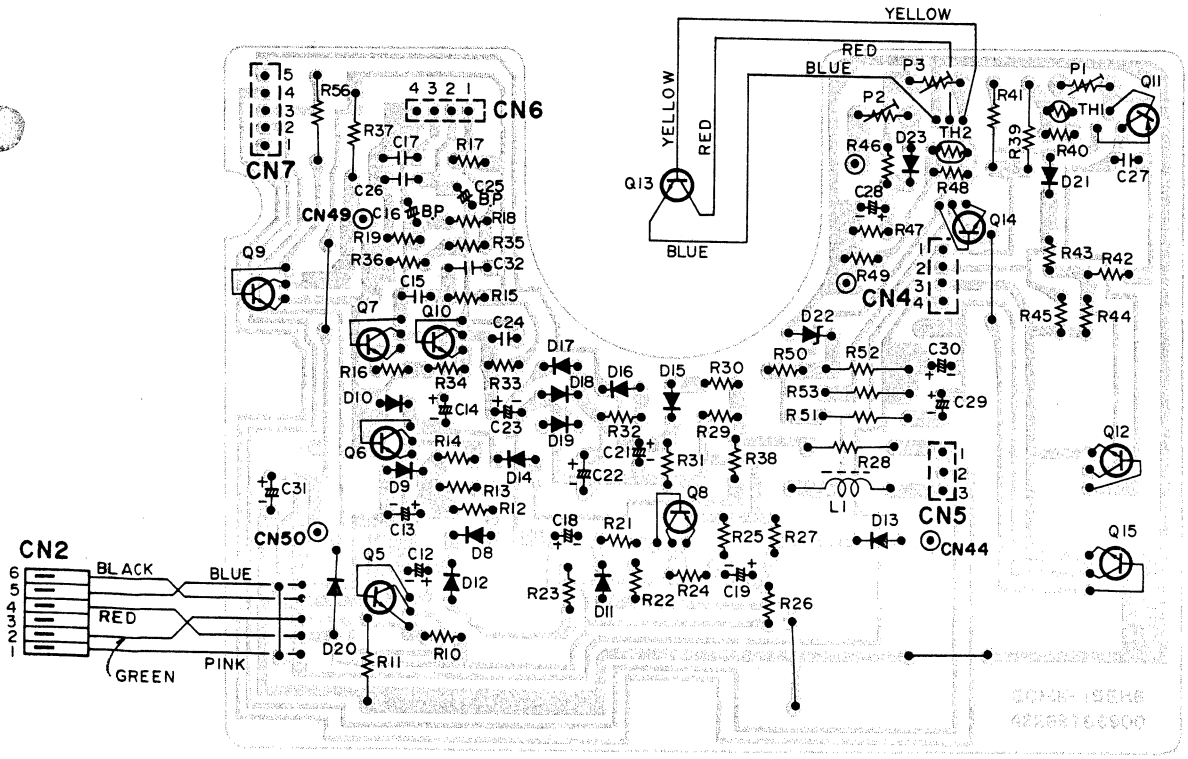


CONTROL CIRCUIT P.C.BOARD

CONTROL CIRCUIT (Top View)

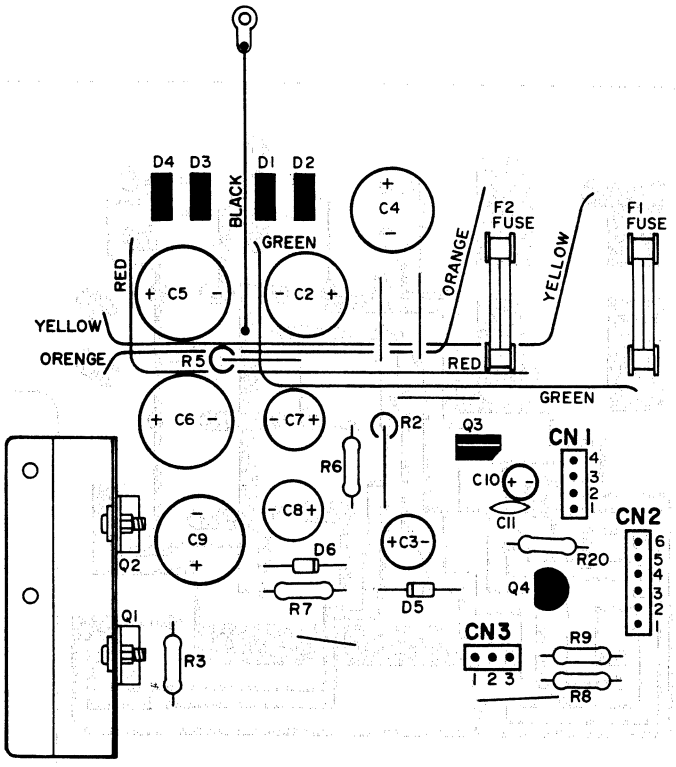


CONTROL CIRCUIT (Bottom View)

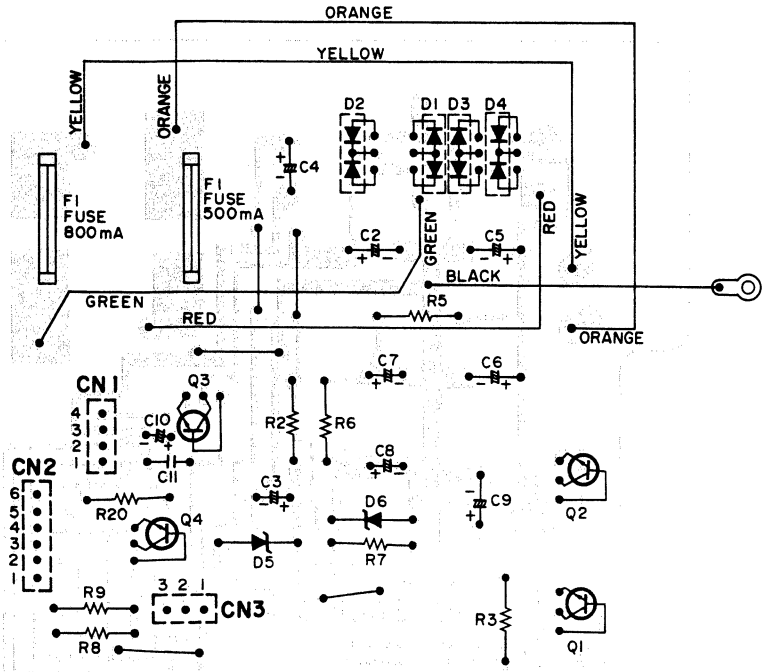


POWER SUPPLY P.C.BOARD

POWER SUPPLY P.C.B. (Top View)

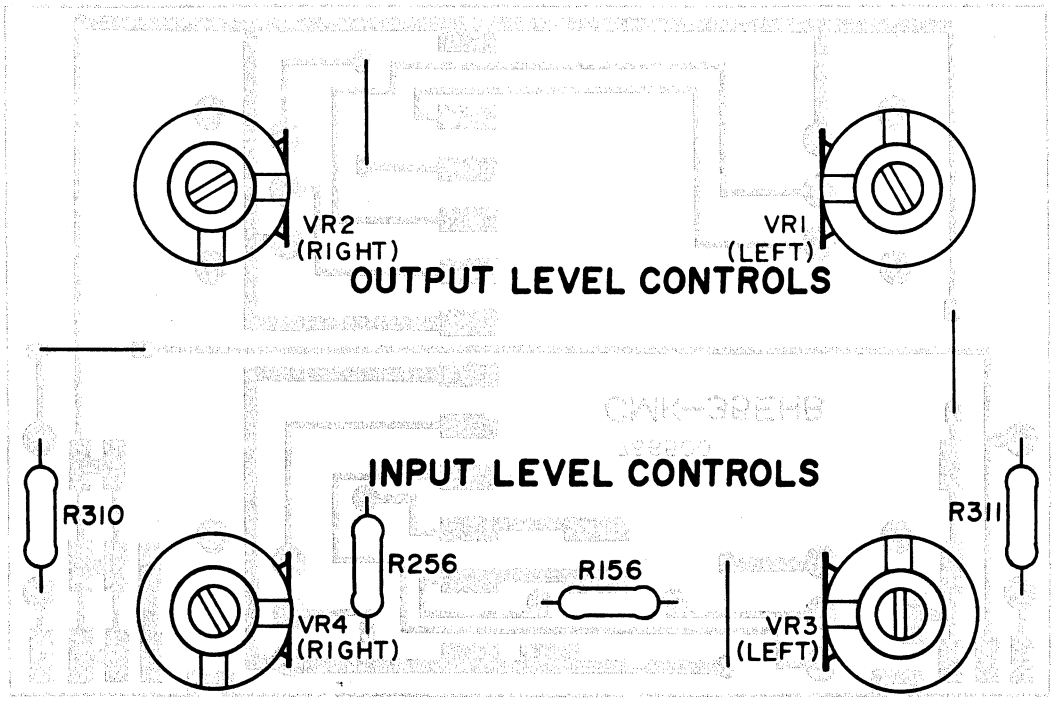


POWER SUPPLY P.C.B. (Bottom View)

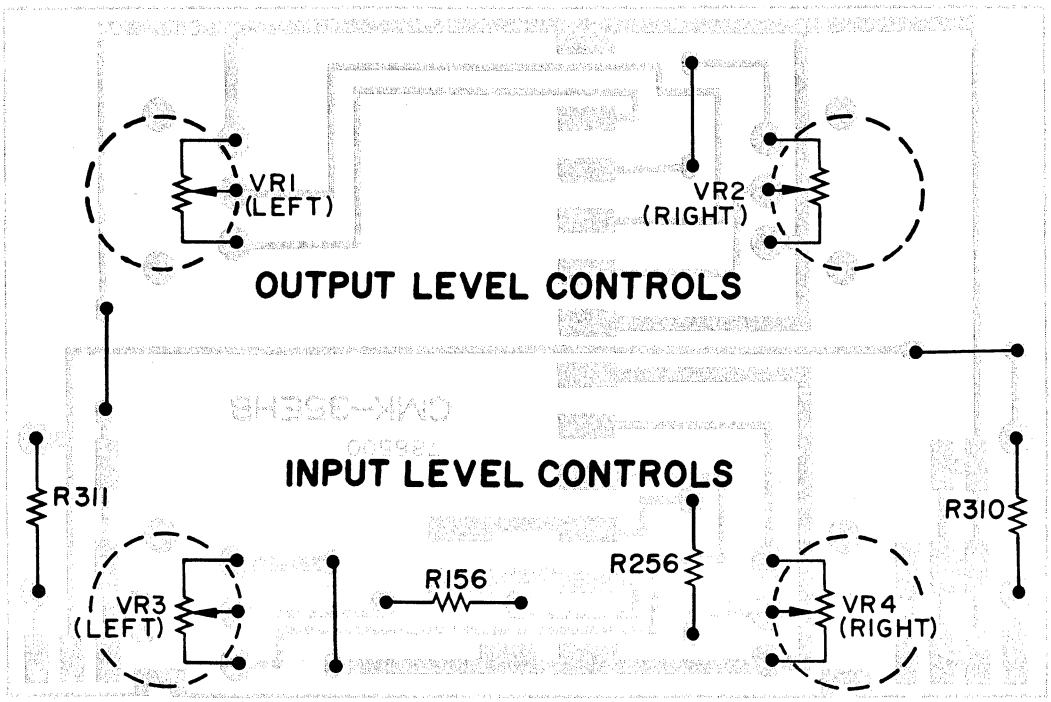


VOLUME CONTROL P.C.BOARD

VOLUME CONTROL P.C.B. (Top View)

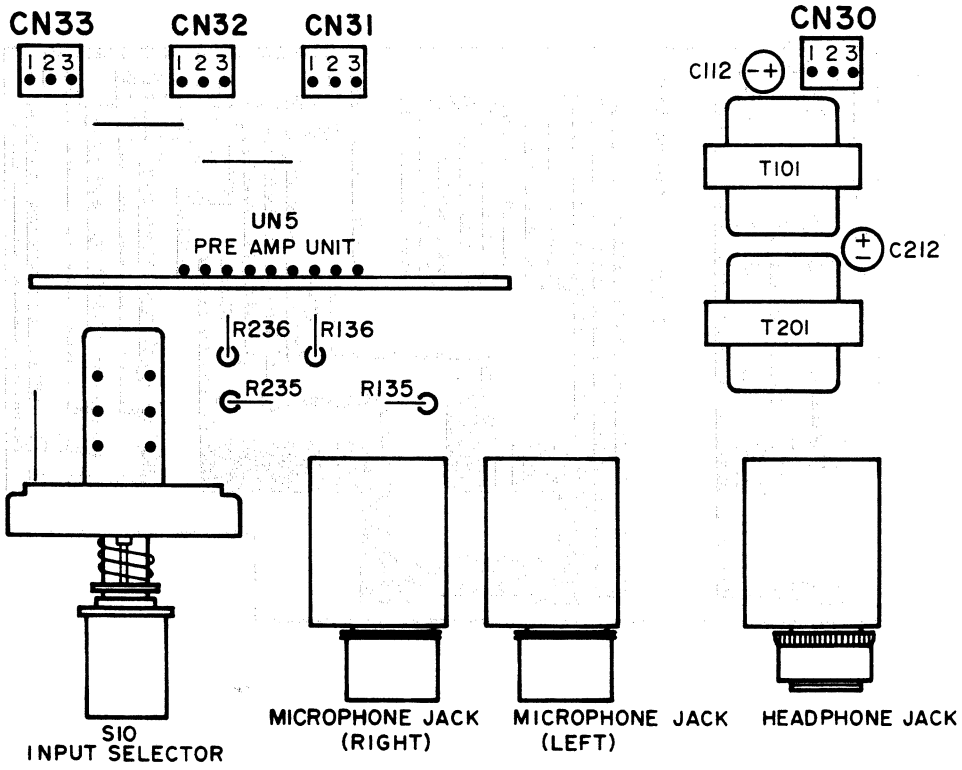


VOLUME CONTROL P.C.B. (Bottom View)

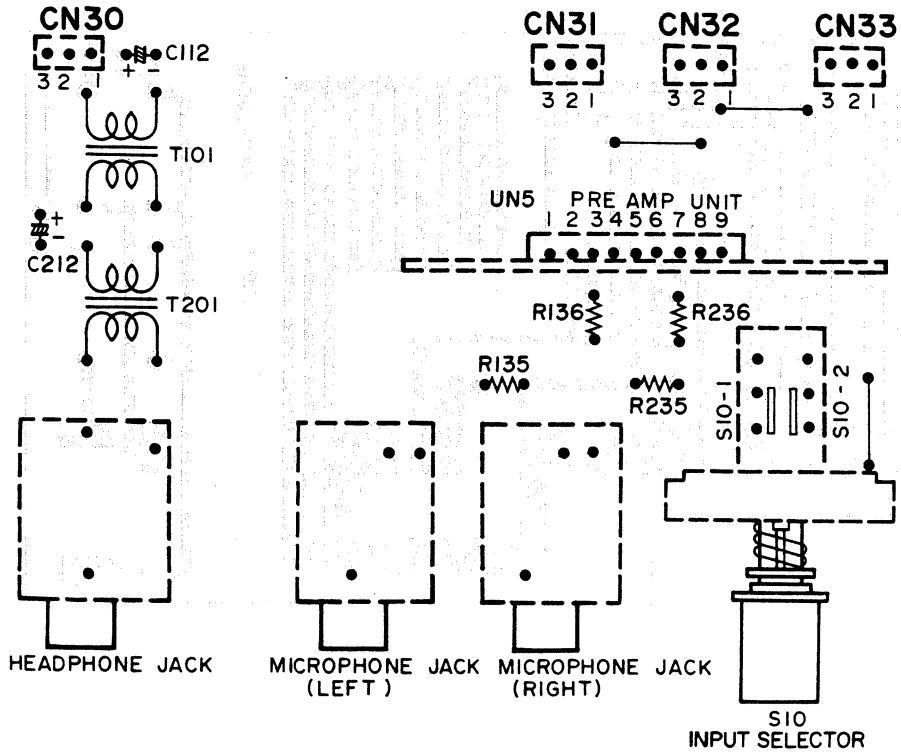


JACK P.C.BOARD

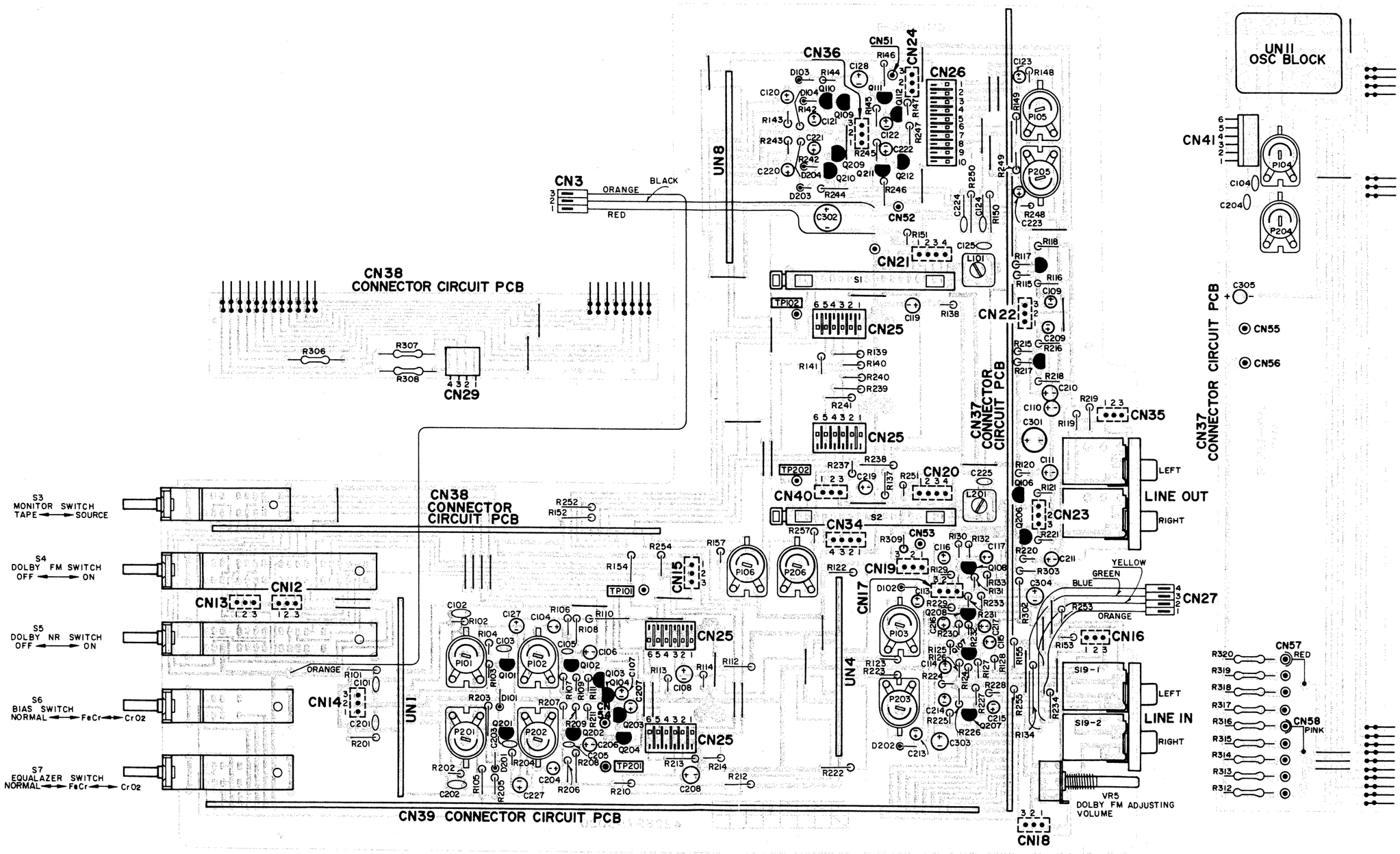
JACK P.C.B. (Top View)



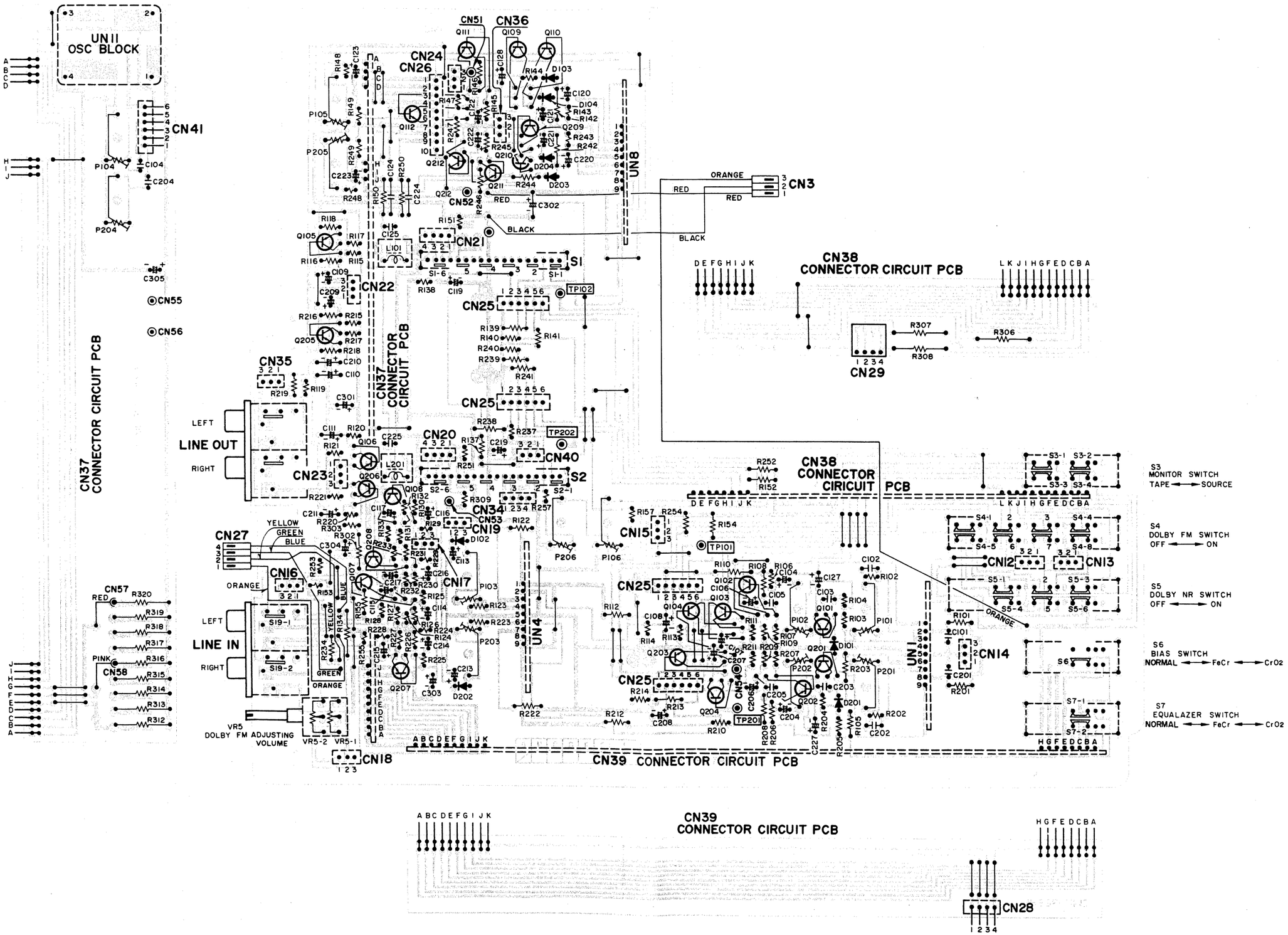
JACK P.C.B. (Bottom View)



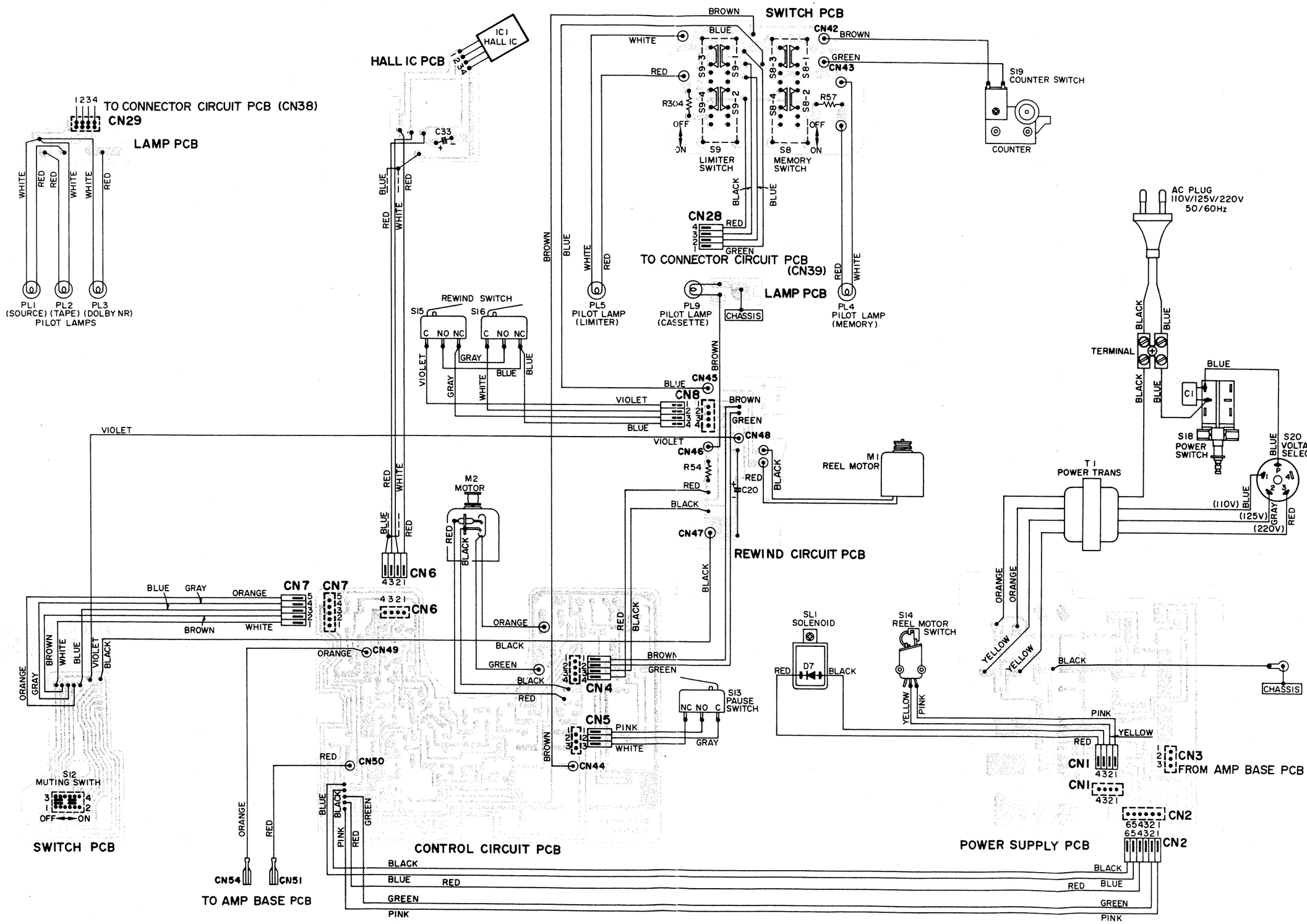
AMPLIFIER BASE P.C.BOARD (TOP VIEW)



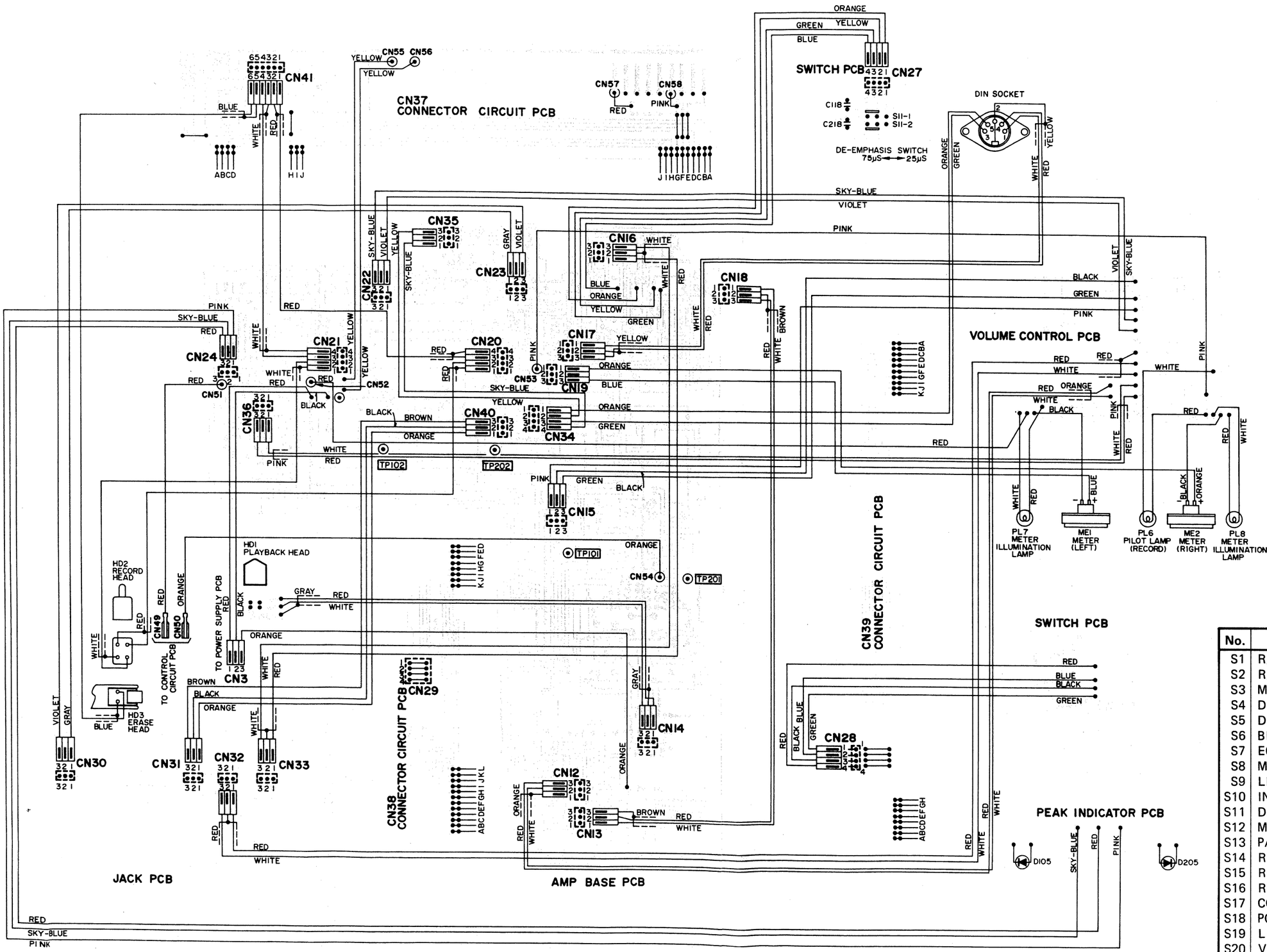
AMPLIFIER BASE P.C.BOARD (BOTTOM VIEW)



WIRING DIAGRAM

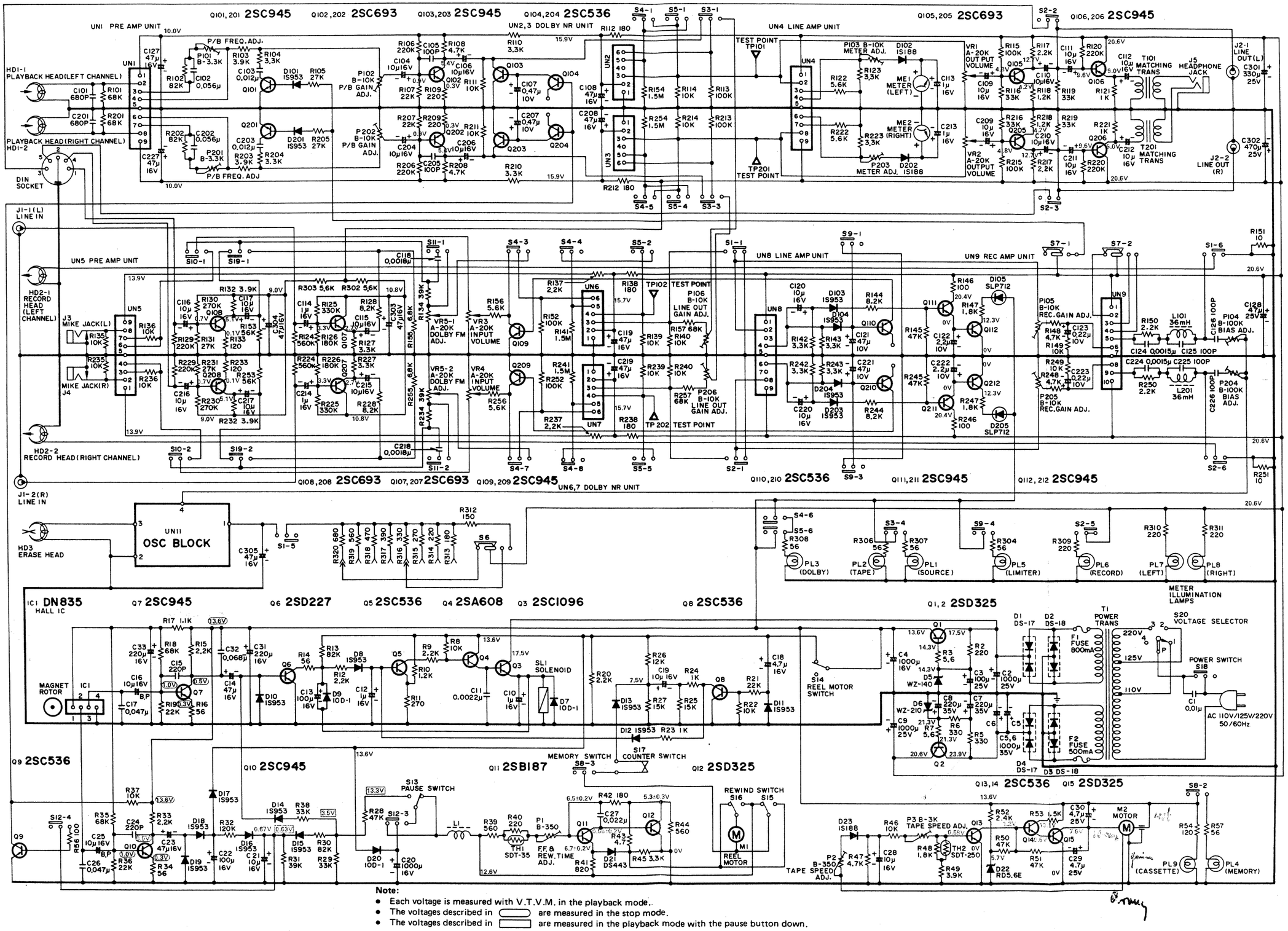


WIRING DIAGRAM



No.	NAME	POSITION
S1	R/P Switch (L Channel)	Playback
S2	R/P Switch (R Channel)	Playback
S3	MONITOR Switch	TAPE
S4	DOLBY FM Switch	OFF
S5	DOLBY NR Switch	OFF
S6	BIAS Switch	NORMAL
S7	EQUALAZER Switch	NORMAL
S8	MEMORY Switch	OFF
S9	LIMITER Switch	OFF
S10	INPUT Selector	LINE
S11	DE-EMPHASIS Switch	75μS
S12	MUTING Switch	OFF
S13	PAUSE Switch	OFF
S14	REEL MOTOR Switch	ON
S15	REWIND Switch	OFF
S16	REWIND Switch	OFF
S17	COUNTER Switch	OFF
S18	POWER Switch	ON
S19	LINE/DIN Selector	LINE
S20	Voltage Selector	110V

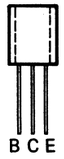
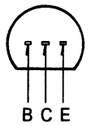
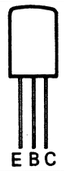
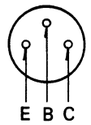
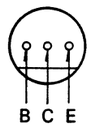
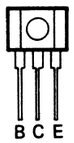
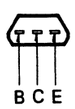
SCHEMATIC DIAGRAM



Note:

- Each voltage is measured with V.T.V.M. in the playback mode.
- The voltages described in ⬭ are measured in the stop mode.
- The voltages described in ▭ are measured in the playback mode with the pause button down.

TRANSISTOR LEAD IDENTIFICATION

FRONT VIEW	BOTTOM VIEW	TRANSISTOR
		2SC536 2SC693 2SC945 2SD227
		2SB187
		2SC536
		2SA608

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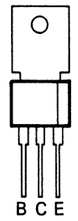
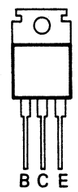
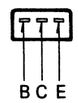
		2SC1096
		2SD325

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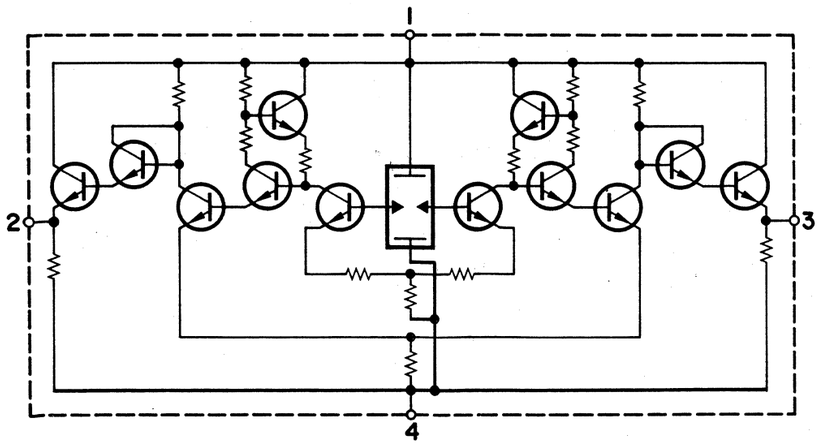
B⇒ BASE C⇒ COLLECTOR E⇒ EMITTER

IC EQUIVALENT CIRCUIT

HALL IC DN835 EQUIVALENT CIRCUIT



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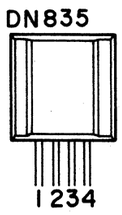

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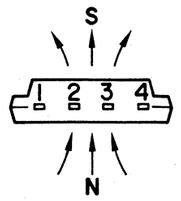

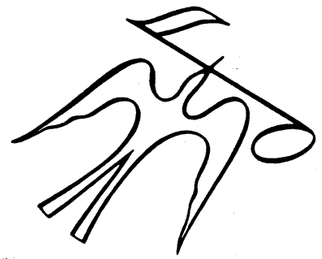

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